REPORT NUMBER: 208-MGA-2006-005

VEHICLE SAFETY COMPLIANCE TESTING
FOR
FMVSS 208, OCCUPANT CRASH PROTECTION
FMVSS 212, WINDSHIELD MOUNTING
FMVSS 219, WINSHIELD INTRUSION (PARTIAL)
FMVSS 301, FUEL SYSTEM INTEGRITY

DaimlerChrysler AG Stuttgart
2006 Mercedes E350 Passenger Car
NHTSA No.: C60503

PREPARED BY:
MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Dates: October 3, 2005 – July 18, 2006

Final Report Date: December 12, 2006

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-03-D-11002.

Prepared by: Jeff Lewandowski Date: December 12, 2006
Jeff Lewandowski, Project Engineer

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FINAL REPORT ACCEPTED BY OVSC:

Accepted By: Charla R. Case

Acceptance Date: December 12, 2006

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
208-MGA-2006-005		

4. Title and Subtitle Final Report of FMVSS 208 Compliance Testing of a 2006 Mercedes E350 NHTSA No.: C60503	*5. Report Date* December 12, 2006
	6. Performing Organization Code MGA
7. Author(s) Jeff Lewandowski, Project Engineer	*8. Performing Organization Report No.* 208-MGA-2006-005
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105	*10. Work Unit No.*
	11. Contract or Grant No. DTNH22-03-D-11002
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Enforcement Office of Vehicle Safety Compliance 400 Seventh St., S.W., Room 6115 NVS-220 Washington, D.C. 20590	*13. Type of Report and Period Covered* 10/3/05-12/12/06
	14. Sponsoring Agency Code NVS-220

15. Supplementary Notes

16. Abstract

Compliance tests were conducted on the subject 2006 Mercedes E350 in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-13 for the determination of FMVSS 208 compliance. Test failures identified were as follows:

The driver side and passenger side sun visor warning labels are not permanently affixed. The labels are easily peeled off the visor. S4.5.1 (c) Each vehicle shall have a label permanently affixed to either side of the sun visor, at the manufacturer's option, at each front outboard seating position that is equipped with an inflatable restraint. The gluing process was changed for the remainder of the 2006 model year and an additional heating process was scheduled to be added at the beginning of the 2007 model year.

17. Key Words Frontal Impact 40 kmph Vehicle Safety Compliance Testing FMVSS 208, "Occupant Crash Protection" FMVSS 212, "Windshield Mounting" FMVSS 219, (partial), "Windshield Zone Intrusion" FMVSS 301, "Fuel System Integrity"	*18. Distribution Statement* Copies of this report are available from the following: NHTSA Technical Information Services (TIS), Mail Code: NPO-230 400 Seventh Street, S.W., Room 5108 Washington, D.C. 20590 Tel. No.: (202) 366-4946

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	402	

Form DOT F1700.7 (8-72)

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PURPOSE OF COMPLIANCE TEST

The tests performed are part of a program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-03-D-11002. The purpose of this test was to determine whether the subject vehicle, a 2006 Mercedes E350, NHTSA No. C60503, meets certain performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219, "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No. TP208-13 dated July 27, 2005.

SECTION 2

TESTS PERFORMED

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	10/3/05 - 7/18/06

The following checked items indicate the tests that were performed:

X	1.	Rear outboard seating position seat belts (S4.1.1.2(b) & (S4.2.4)
X	2.	Air bag labels (S4.5.1)
X	3.	Readiness indicator (S4.5.2)
X	4.	Passenger air bag manual cut-off device (S4.5.4)
X	5.	Lap belt lockability (S7.1.1.5)
X	6.	Seat belt warning system (S7.3)
X	7.	Seat belt contact force (S7.4.4)
X	8.	Seat belt latch plate access (S7.4.4)
X	9.	Seat belt retraction (S7.4.5)
X	10.	Seat belt guides and hardware (S7.4.6)
X	11.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R)
X	12.	Suppression tests with newborn infant (Part 572, Subpart K)
	13.	Suppression tests with 3-year-old dummy (Part 572, Subpart P)
	14.	Suppression tests with 6-year-old dummy (Part 572, Subpart N)
X	15.	Test of reactivation of the passenger air bag system with an unbelted 5th percentile female dummy
	16.	Low risk deployment test with 12-month-old dummy (Part 572, Subpart R)
X	17.	Low risk deployment test with 3-year-old dummy (Part 572, Subpart P)
X	18.	Low risk deployment test with 6-year-old dummy (Part 572, Subpart N)
X	19.	Low risk deployment test with 5th female dummy (Part 572, Subpart O)
X	20.	Impact Tests

- [ ] Frontal Oblique
  - [ ] Belted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
  - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
  - [ ] Unbelted 50th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b))
- [X] Frontal 0°
  - [ ] Belted 50th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
  - [ ] Belted 50th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
  - [ ] Belted 5th female dummy driver (0 to 48 kmph) (S16.1(a))
  - [ ] Belted 5th female dummy passenger (0 to 48 kmph) (S16.1(a))
  - [ ] Belted 50th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))
  - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))
  - [ ] Unbelted 50th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
  - [ ] Unbelted 50th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))

X	Unbelted 5th female dummy driver (32 to 40 kmph) (S16.1(b))
X	Unbelted 5th female dummy passenger (32 to 40 kmph) (S16.1(b))
	40% Offset 0° Belted 5th male dummy driver and passenger (0 to 40 kmph) (S18.1)

	21.	Sled Test: unbelted 50th male dummy driver and passenger (S13)
	22.	FMVSS 204 Indicant Test
X	23.	FMVSS 212 Indicant Test
X	24.	FMVSS 219 Indicant Test
X	25.	FMVSS 301 Frontal Indicant Test

For the crash tests, the vehicle was instrumented with 8 accelerometers. The accelerometer data from the vehicle and dummies were sampled at 10,000 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, S4.13.

The dynamic tests were recorded using high-speed film and high-speed digital video.

The vehicle does not appear to meet all of the performance requirements to which it was tested: The driver side and passenger side sun visor warning labels are not permanently affixed. The labels are easily peeled off the visor. S4.5.1 (c) Each vehicle shall have a label permanently affixed to either side of the sun visor, at the manufacturer's option, at each front outboard seating position that is equipped with an inflatable restraint. The gluing process was changed for the remainder of the 2006 model year and an additional heating process was scheduled to be added at the beginning of the 2007 model year.

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	2/15/06 & 3/29/06

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 081 Position 1 (Chin On Module) 2-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	7
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	17.6
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	45.6
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	318.3
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	254.3
Neck Tension	2070 N	564
Neck Compression	2520 N	116
Chest g	60 g	11
Chest Displacement	52 mm	8
Left Femur	6805 N	141
Right Femur	6805 N	36

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 325 ms

5th Percentile Female SN 081 Position 2 (Chin On Rim) 3-29-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	9
Peak Nij (Nte)	1.0	0.4
Time (ms)	NA	16.2
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	80.0
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	296.2
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	55.7
Neck Tension	2070 N	488
Neck Compression	2520 N	80
Chest g	60 g	24
Chest Displacement	52 mm	16
Left Femur	6805 N	84
Right Femur	6805 N	44

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 325 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	2/15/06 & 6/7/06

3-Year-Old Low Risk Deployments

3-Year-Old SN 032 Position 1 (Chest On Instrument Panel) 2-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	570	No Valid Data
Peak Nij (Nte)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Ntf)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Nce)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Ncf)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Neck Tension	1130 N	No Valid Data
Neck Compression	1380 N	No Valid Data
Chest g	55 g	No Valid Data
Chest Displacement	34 mm	No Valid Data

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 100 ms

The data is not reported because of noise caused by a dummy grounding problem.

3-Year-Old SN 032 Position 2 (Head On Instrument Panel) 6-7-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	570	247
Peak Nij (Nte)	1.0	0.5
Time (ms)	NA	47.7
Peak Nij (Ntf)	1.0	0.6
Time (ms)	NA	10.1
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	20.3
Peak Nij (Ncf)	1.0	0.8
Time (ms)	NA	11.5
Neck Tension	1130 N	380
Neck Compression	1380 N	186
Chest g	55 g	19
Chest Displacement	34 mm	0

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 100 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	3/29/06 & 5/10/06

6-Year-Old Low Risk Deployments

6-Year-Old SN 155 Position 1 (Chest On Instrument Panel) 3-29-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	12
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	98.6
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	13.6
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	1.3
Peak Nij (Ncf)	1.0	0.0
Time (ms)	NA	0.2
Neck Tension	1490 N	407
Neck Compression	1820 N	29
Chest g	60 g	12
Chest Displacement	40 mm	4

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 100 ms

6-Year-Old SN 155 Position 2 (Head On Instrument Panel) 5-10-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	474
Peak Nij (Nte)	1.0	0.8
Time (ms)	NA	32.2
Peak Nij (Ntf)	1.0	0.4
Time (ms)	NA	14.2
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	0.3
Peak Nij (Ncf)	1.0	0.3
Time (ms)	NA	12.2
Neck Tension	1490 N	558
Neck Compression	1820 N	332
Chest g	60 g	10
Chest Displacement	40 mm	2

Second stage fire time of 200 ms; Injuries calculated on 0 ms to 100 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance

NHTSA No.: C60503
Test Dates: 10/3/05 - 7/18/06

40 kmph Frontal Crash

Impact Angle: Zero degrees

Belted Dummies: ___Yes _X_ No
Speed Range: ___ 0 to 40 kmph _X_ 32 to 40 kmph
___ 0 to 48 kmph ___ 0 to 56 kmph

Test Speed: 39.8 kmph Test Weight: 1946.8 kg

Driver Dummy: _X_ 5th female ___ 50th male
Passenger Dummy: _X_ 5th female ___ 50th male

5th Percentile Female Frontal Crash Test
Vehicles certified to S16.1(a), S16.1(b), or S18.1

Injury Criteria	Max. Allowable Injury Assessment Values	Driver	Passenger
HIC15	700	53	28
N_{te}	1.0	0.3	0.1
N_{tf}	1.0	0.2	0.2
N_{ce}	1.0	0.0	0.1
N_{cf}	1.0	0.2	0.5
Neck Tension	2620 N	812	261
Neck Compression	2520 N	75	530
Chest g	60 g	39	28
Chest Displacement	52 mm	21	9
Left Femur	6805 N	2407	3926
Right Femur	6805 N	3969	4060 *

* The right femur measure reported occurred at the same time as the maximum left femur injury measure. In addition, data was collected for another 20 ms before being cut off and the plot of the data has the normal shape. Thus the right femur injury measure is thought to be valid.

SECTION 4

DISCUSSION OF TESTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	10/3/05 - 7/18/06

The driver and passenger side sun visor air bag warning labels are not permanently affixed to the sun visor. The labels are easily peeled off of the visor: S4.5.1 (c) Each vehicle shall have a label permanently affixed to either side of the sun visor, at the manufacturer's option, at each front outboard seating position that is equipped with an inflatable restraint. The gluing process was changed for the remainder of the 2006 model year and an additional heating process was scheduled to be added at the beginning of the 2007 model year.

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

There was no valid data during the 3YO P1 Low Risk Deployment conducted on 2-15-06 due to a dummy grounding problem. The test plots are included in Appendix B for information purposes ONLY.

There was no valid data after 84 msec on the passenger right femur during the frontal impact crash test. The right femur measure reported occurred at the same time as the maximum left femur injury measure. In addition, data was collected for another 20 ms before being cut off and the plot of the data has the normal shape. Thus the right femur injury measure is thought to be valid.

There was no valid data after 50 msec on the Instrument Panel (X) accelerometer during the frontal impact crash test.

SECTION 5

TEST DATA SHEETS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	10/3/06 - 7/18/06

DATA SHEET 1

COTR VEHICLE WORK ORDER

Test Vehicle: 2006 Mercedes E350 NHTSA No.: C60503
Test Program: FMVSS 208 Compliance Test Dates: 10/3/05 - 7/18/06

COTR Signature: Charles R. Case

Test to be performed for this vehicle are checked below:

X	1.	Rear Outboard Seating Position Seat Belts (S4.1.2(b)) & (S4.2.4)
X	2.	Air Bag Labels (S4.5.1)
X	3.	Readiness Indicator (S4.5.2)
X	4.	Passenger Air Bag Manual Cut-off Device (S4.5.4)
X	5.	Lap Belt Lockability (S7.1.1.5)
X	6.	Seat Belt Warning System (S7.3)
X	7.	Seat Belt Contact Force (S7.4.4)
X	8.	Seat Belt Latch Plate Access (S7.4.4)
X	9.	Seat Belt Retraction (S7.4.5)
X	10.	Seat Belt Guides and Hardware (S7.4.6)
X	11.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

X	Britax Handle with Care 191	X	Full Rearward	X	Mid Position	X	Full Forward
	Century Assura 4553		Full Rearward		Mid Position		Full Forward
	Century Avanta SE 41530		Full Rearward		Mid Position		Full Forward
	Century Smart Fit 4543		Full Rearward		Mid Position		Full Forward
	Cosco Arriva 02727		Full Rearward		Mid Position		Full Forward
	Cosco Opus 35 02603		Full Rearward		Mid Position		Full Forward
	Evenflo Discovery Adjust Right 212		Full Rearward		Mid Position		Full Forward
X	Evenflo First Choice 204	X	Full Rearward	X	Mid Position	X	Full Forward
	Evenflo On My Way Position Right V 282		Full Rearward		Mid Position		Full Forward
X	Graco Infant 8457	X	Full Rearward	X	Mid Position	X	Full Forward

Section C

X	Britax Roundabout 161	X	Full Rearward	X	Mid Position	X	Full Forward
X	Century Encore 4612	X	Full Rearward	X	Mid Position	X	Full Forward
	Century STE 1000 4416		Full Rearward		Mid Position		Full Forward
	Cosco Olympian 02803		Full Rearward		Mid Position		Full Forward
	Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
	Evenflo Horizon V 425		Full Rearward		Mid Position		Full Forward
X	Evenflo Medallion 254	X	Full Rearward	X	Mid Position	X	Full Forward

X	12.	Suppression tests with newborn infant (Part 572, Subpart K) using the following indicated child restraints.

Section A

X	Cosco Dream Ride 02-719	X	Full Rearward	X	Mid Position	X	Full Forward

	13.	Suppression tests with 3-year-old dummy (Part 572, Subpart P) using the following indicated child restraints where a child restraint is required.

Section C

Britax Roundabout 161	Full Rearward	Mid Position	Full Forward
Century Encore 4612	Full Rearward	Mid Position	Full Forward
Century STE 1000 4416	Full Rearward	Mid Position	Full Forward
Cosco Olympian 02803	Full Rearward	Mid Position	Full Forward
Cosco Touriva 02519	Full Rearward	Mid Position	Full Forward
Evenflo Horizon V 425	Full Rearward	Mid Position	Full Forward
Evenflo Medallion 254	Full Rearward	Mid Position	Full Forward

Section D

Britax Roadster 9004	Full Rearward	Mid Position	Full Forward
Century Next Step 4920	Full Rearward	Mid Position	Full Forward
Cosco High Back Booster 02-442	Full Rearward	Mid Position	Full Forward
Evenflo Right Fit 245	Full Rearward	Mid Position	Full Forward

14. Suppression tests with representative 3-year-old child using the following indicated child restraints where a child restraint is required. (Appendix H, Data Sheet 16H and 17H)

Section C

Britax Roundabout 161	Full Rearward	Mid Position	Full Forward
Century Encore 4612	Full Rearward	Mid Position	Full Forward
Century STE 1000 4416	Full Rearward	Mid Position	Full Forward
Cosco Olympian 02803	Full Rearward	Mid Position	Full Forward
Cosco Touriva 02519	Full Rearward	Mid Position	Full Forward
Evenflo Horizon V 425	Full Rearward	Mid Position	Full Forward
Evenflo Medallion 254	Full Rearward	Mid Position	Full Forward

Section D

Britax Roadster 9004	Full Rearward	Mid Position	Full Forward
Century Next Step 4920	Full Rearward	Mid Position	Full Forward
Cosco High Back Booster 02-442	Full Rearward	Mid Position	Full Forward
Evenflo Right Fit 245	Full Rearward	Mid Position	Full Forward

15. Suppression tests with 3-year-old dummy (Part 572, Subpart P) in the following Forward, Middle, and Rearward seat track positions

- Sitting on seat with back against seat back (S22.2.2.1)
- Sitting on seat with back against reclined seat back (S22.2.2.2)
- Sitting on seat with back not against seat back (S22.2.2.3)
- Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
- Standing on seat, facing forward (S22.2.2.5)
- Kneeling on seat facing forward (S22.2.2.6)
- Kneeling on seat facing rearward (S22.2.2.7)
- Lying on seat (S22.2.2.8)

16. Suppression tests with representative 3-year-old child in the following positions

- Sitting on seat with back against seat back (S22.2.2.1)
- Sitting on seat with back against reclined seat back (S22.2.2.2)
- Sitting on seat with back not against seat back (S22.2.2.3)
- Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
- Standing on seat, facing forward (S22.2.2.5)
- Kneeling on seat facing forward (S22.2.2.6)
- Kneeling on seat facing rearward (S22.2.2.7)
- Lying on seat (S22.2.2.8)

17. Suppression tests with 6-year-old dummy (Part 572, Subpart N) using the following indicated child restraints where a child restraint is required.

Section D

	Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
	Century Next Step 4920		Full Rearward		Mid Position		Full Forward
	Cosco High Back Booster 02-442		Full Rearward		Mid Position		Full Forward
	Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward

18. Suppression tests with representative 6-year-old child using the following indicated child restraints where a child restraint is required.

Section D

	Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
	Century Next Step 4920		Full Rearward		Mid Position		Full Forward
	Cosco High Back Booster 02-442		Full Rearward		Mid Position		Full Forward
	Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward

19. Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following Forward, Middle, and Rearward seat track positions

- Sitting on seat with back against seat back (S22.2.2.1)
- Sitting on seat with back against reclined seat back (S22.2.2.2)
- Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
- Sitting back in the seat and leaning on the right front passenger door (S24.2.3)

20. Suppression tests with representative 6-year-old child in the following positions

- Sitting on seat with back against seat back (S22.2.2.1)
- Sitting on seat with back against reclined seat back (S22.2.2.2)
- Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
- Sitting back in the seat and leaning on the right front passenger door (S24.2.3)

X 21. Test of Reactivation of the Passenger Air Bag System with an Unbelted 5^{th} percentile female dummy (S20.3, 22.3, S24.3). Perform this test after the following suppression tests: After each restraint.

22. Test of Reactivation of the passenger air bag system with a representative 5^{th} percentile female (S20.3, 22.3, S24.3). Perform this test after the following suppression tests:

23. Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

	Britax Handle with Care 191		Full Rearward		Mid Position		Full Forward
	Century Assura 4553		Full Rearward		Mid Position		Full Forward
	Century Avanta SE 41530		Full Rearward		Mid Position		Full Forward
	Century Smart Fit 4543		Full Rearward		Mid Position		Full Forward
	Cosco Arriva 02727		Full Rearward		Mid Position		Full Forward
	Cosco Opus 35 02603		Full Rearward		Mid Position		Full Forward
	Evenflo Discovery Adjust Right 212		Full Rearward		Mid Position		Full Forward
	Evenflo First Choice 204		Full Rearward		Mid Position		Full Forward
	Evenflo On My Way Position Right V 282		Full Rearward		Mid Position		Full Forward
	Graco Infant 8457		Full Rearward		Mid Position		Full Forward

Section C

	Britax Roundabout 161		Full Rearward		Mid Position		Full Forward
	Century Encore 4612		Full Rearward		Mid Position		Full Forward
	Century STE 1000 4416		Full Rearward		Mid Position		Full Forward
	Cosco Olympian 02803		Full Rearward		Mid Position		Full Forward
	Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
	Evenflo Horizon V 425		Full Rearward		Mid Position		Full Forward
	Evenflo Medallion 254		Full Rearward		Mid Position		Full Forward

X	24.	Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) in the following positions
	X	Position 1
	X	Position 2
X	25.	Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions
	X	Position 1
	X	Position 2
X	26.	Low risk deployment test with 5th percentile female dummy (Part 572, Subpart O) in the following positions
	X	Position 1
	X	Position 2
X	27.	Impact Tests

- [ ] Frontal Oblique – Test Speed:
  - [ ] Belted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
  - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
  - [ ] Unbelted 50th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b))
- [X] Frontal 0° - Test Speed: 39.8 kmph
  - [ ] Belted 50th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
  - [ ] Belted 50th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
  - [ ] Belted 5th female dummy driver (0 to 48 kmph) (S16.1(a))
  - [ ] Belted 5th female dummy passenger (0 to 48 kmph) (S16.1(a))
  - [ ] Belted 50th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))
  - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))
  - [ ] Unbelted 50th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
  - [ ] Unbelted 50th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
  - [X] Unbelted 5th female dummy driver (32 to 40 kmph) (S16.1(b))
  - [X] Unbelted 5th female dummy passenger (32 to 40 kmph) (S16.1(b))
- [ ] 40% Offset 0° Belted 5th male dummy driver and passenger (0 to 40 kmph) (S18.1) – Test Speed:

	28.	Sled Test: Unbelted 50th male dummy driver and passenger (S13)
	29.	FMVSS 204 Indicant Test
X	30.	FMVSS 212 Indicant Test
X	31.	FMVSS 219 Indicant Test
X	32.	FMVSS 301 Frontal Indicant Test

DATA SHEET 2

REPORT OF VEHICLE CONDITION

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Dates:	10/3/05 - 7/18/06

CONTRACT NO. DTNH22-03-D-11002 Date: 7/27/05

FROM (Lab and rep name): MGA Research Corporation

TO: NHTSA, OVSC (NVS-220)

PURPOSE: (X) Initial Receipt ( ) Received via Transfer ( ) Present vehicle condition

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2006 Mercedes E350 Sedan

MANUFACTURE DATE:	06/05		
NHTSA NO.	C60503	GVWR:	2195 kg (4840 lbs)
BODY COLOR:	Silver	GAWR (Fr):	1000 kg (2205 lbs)
VIN:	WDBUF56J76A841487	GAWR (Rr):	1195 kg (2635 lbs)

ODOMETER READINGS:	ARRIVAL (miles):	100	DATE:	9/27/05
	COMPLETION (miles):	173	DATE:	7/18/06

PURCHASE PRICE: ($) 54,465

DEALER'S NAME: Zimbrick European, 320 W Beltline Hwy, Madison, WI 537113

A. All options listed on window sticker are present on the test vehicle:
_X_Yes ___No

B. Tires and wheel rims are new and the same as listed: _X_Yes ___No

C. There are no dents or other interior or exterior flaws: _X_Yes ___No

D. The vehicle has been properly prepared and is in running condition:
_X_Yes ___No

E. Keyless remote is available and working: _X_ Yes ___No

F. The glove box contains an owner's manual, warranty document, consumer information, and extra set of keys: _X_Yes ___No

G. Proper fuel filler cap is supplied on the test vehicle: _X_Yes ___No

H. Using permanent marker, identify vehicle with NHTSA number and FMVSS test type(s) on roof line above driver door or for school buses, place a placard with NHTSA number inside the windshield and to the exterior front and rear side of bus:
_X_Yes ___No

I. Place vehicle in storage area: _X_Yes ___No

J. Inspect the vehicle's interior and exterior, including all windows, seats, doors, etc. to confirm that each system is complete and functional per the manufacturer's specifications. Any damage, misadjustment, or other unusual condition that could influence the test program or test results shall be recorded. Report any abnormal condition to the NHTSA COTR before beginning any test:
_X_Vehicle OK ___Conditions reported below

REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

LIST OF FMVSS TESTS PERFORMED BY THIS LAB: FMVSS 208, 212, 219, 301

VEHICLE: 2006 Mercedes E350 NHTSA NO. C60503

REMARKS:

Equipment that is no longer on the test vehicle as noted on previous page:

Spare tire, jack and tools, rear seat cushion, and trunk interior

Explanation for equipment removal:

Components removed for instrumentation installation and to meet target weight.

Test Vehicle Condition:

25 mph frontal impact damage- front suspension & structure damaged, hood & front quarter panels damaged, radiator damaged, air bags & pretensioners deployed, Stoddard in fuel system

RECORDED BY: Jeff Lewandowski DATE: 7/27/2006

APPROVED BY: David Winkelbauer DATE: 7/27/2006

# #

RELEASE OF TEST VEHICLE

The vehicle described above is released from MGA to be delivered to:

Date: Time: Odometer:

Lab Rep’s Signature:

Title:

Carrier/Customer Rep:

Date:

DATA SHEET 3

CERTIFICATION LABEL AND TIRE PLACARD INFORMATION

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Dates: 10/3/05 - 7/18/06

Certification Label	
Manufacturer:	DaimlerChrysler AG Stuttgart
Date of Manufacture:	06/05
VIN:	WDBUF56J76A841487
Vehicle Certified As (Pass. Car/MPV/Truck/Bus):	Passenger Car
Front Axle GVWR:	1000 kg (2205 lbs)
Rear Axle GVWR:	1195 kg (2635 lbs)
Total GVWR:	2195 kg (4840 lbs)

Tire Placard	
Not applicable, vehicle is not a passenger car and does not have a tire placard.	Passenger Car
This is not a passenger car, but all or part of this information is still contained on a vehicle label and is reported here.	Passenger Car
Vehicle Capacity Weight:	460 kg (1010 lbs)
Designated Seating Capacity Front:	2
Designated Seating Capacity Rear:	3
Total Designated Seating Capacity:	5
Recommended Cold Tire Inflation Pressure Front:	196 kpa (28 psi)
Recommended Cold Tire Inflation Pressure Rear:	210 kpa (30 psi)
Recommended Tire Size:	P245/45R17

Signature: Nick Kosinski

Date: 7/18/06

DATA SHEET 4

REAR OUTBOARD SEATING POSITION SEAT BELTS

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 10/3/05

	Yes	No
Do all rear outboard seating positions have Type 2 seat belts?	X	

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a Type 2 seat belt was not installed.

REMARKS:

Signature: Nick Kosinski

Date: _____10/3/05_____

DATA SHEET 5

AIR BAG LABELS (S4.5.1)

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 10/3/05

X	1.	Air bag maintenance label and owner's manual instructions: (S4.5.1(a))
X	1.1	Does the manufacturer recommend periodic maintenance or replacement of the air bag? [ ] Yes, go to 1.2 [X] No – go to 2
	1.2	Does the vehicle have a label specifying air bag maintenance or replacement? [ ] Yes – Pass [ ] No – Fail
	1.3	Does the label contain one of the following? [ ] Yes – Pass [ ] No – Fail Check applicable schedule: _Schedule on label specifies month and year (Record date________) __ Schedule on label specified vehicle mileage (Record mileage_______) __ Schedule on label specifies interval measured from date on certification label (Record interval_______)
	1.4	Is the label permanently affixed within the passenger compartment such that it cannot be removed without destroying or defacing the label or the sunvisor? (3/19/01 legal interpretation to Todd Mitchell) [ ] Yes – Pass [ ] No – Fail
	1.5	Is the label lettered in English? [ ] Yes – Pass [ ] No – Fail
	1.6	Is the label in block capitals and numerals? [ ] Yes – Pass [ ] No – Fail
	1.7	Are the letters and numerals at least 3/32 inches high? [ ] Yes – Pass [ ] No – Fail
	1.8	Does the owner's manual set forth the recommended schedule for maintenance or replacement?
X	2.	Does the owner's manual: (S4.5.1(f))
X	2.1	Include a description of the vehicle's air bag system in an easily understandable format? [X] Yes – Pass [ ] No – Fail
X	2.2	Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating position? [X] Yes – Pass [ ] No – Fail

X 2.3 Include a statement that the air bag is a supplement restraint at the front outboard seating position?

- X Yes – Pass
- No – Fail

X 2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?

- X Yes – Pass
- No – Fail

X 2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to ensure maximum safety protection for those occupants?

- X Yes – Pass
- No – Fail

X 2.6 Explain that no objects should be placed over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

- X Yes – Pass
- No – Fail

X 2.7 Is the vehicle certified to meet the requirements of S14.5, S15, S17, S19, S21, S23, and S25? (Obtain answer from COTR) (S4.5.1(f)(2))

- X Yes – (Go to 2.7.1)
- No – (Go to 3.)

X 2.7.1 Explain the proper functioning of the advanced air bag system? (S4.5.1(f)(2))

- X Yes – Pass
- No – Fail

X 2.7.2 Provide a summary of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2))

- X Yes – Pass
- No – Fail

X 2.7.3 Present and explain the main components of the advanced passenger air bag system? (S4.5.1(f)(2)(i))

- X Yes – Pass
- No – Fail

X 2.7.4 Explain how the components function together as part of the advanced passenger air bag system? (S4.5.1(f)(2)(ii))

- X Yes – Pass
- No – Fail

X 2.7.5 Contain the basic requirements for proper operation, including an explanation of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2)(iii))

- X Yes – Pass
- No – Fail

X 2.7.6 Is the vehicle certified to the requirements of S19.2, S21.2, or 23.2 (automatic suppression)?

- X Yes, continue with 2.7.6
- No, go to 2.7.7

X 2.7.6.1 Contain a complete description of the passenger air bag suppression system installed in the vehicle, including a discussion of any suppression zone? (S4.5.1(f)(2)(iv))

- X Yes – Pass
- No – Fail

X	2.7.6.2	Discuss the telltale light, specifying its location in the vehicle and explaining when the light is illuminated?

- [X] Yes – Pass
- [ ] No – Fail

X	2.7.7	Explain the interaction of the advanced passenger air bag system with other vehicle components, such as seat belts, seats or other components? (S4.5.1(f)(2)(v))

- [X] Yes – Pass
- [ ] No – Fail

X	2.7.8	Summarize the expected outcomes when child restraint systems, children and small teenagers or adults are both properly and improperly positioned in the passenger seat, including cautionary advice against improper placement of child restraint systems? (S4.5.1(f)(2)(vi))

- [X] Yes – Pass
- [ ] No – Fail

X	2.7.9	Provide information on how to contact the vehicle manufacturer concerning modifications for persons with disabilities that my affect the advanced air bag system? (S4.5.1(f)(2)(vii))

- [X] Yes – Pass
- [ ] No – Fail

X	3.	Sun Visor Air Bag Warning Label (S4.5.1(b)) Check only one of the following:

- [ ] The vehicle is not certified to meet the requirements of S19, S21, and S23 (Obtain answer from COTR) (S4.5.1(b)(1)) Go to 3.1 and skip 3.2
- [X] The vehicle is certified to meet the requirements of S19, S21, and S23 on 9/1/03 or later. (Obtain answer from COTR) (S4.5.1(b)(3)) Go to **3.2** and skip 3.1

	3.1	Vehicles not certified to meet the requirements of S19, S21, and S23.
	3.1.1	Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or sun visor? (S4.5.1(b)(1)) (3/19/01 legal interpretation to Todd Mitchell)

- [ ] Driver Side, Yes – Pass
- [ ] Driver Side, No – Fail
- [ ] Passenger Side, Yes – Pass
- [ ] Passenger Side, No – Fail

3.1.2 Does the label conform in content to the label shown in either Figure 6A or 6B (Figure 6b is for vehicles with passenger air bag on-off switches), as appropriate, at each front outboard seating position? (S4.5.1(b)(1)) (Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(b)(1)(iv))

Figure 6a. Sun Visor Label Visible When Visor is in Down Position.

Figure 6b. Sun Visor Label Visible When Visor is in Down Position.

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

3.1.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1(b)(1)(i))

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

3.1.4 Is the message area white with black text? (S4.5.1(b)(1)(ii))

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

3.1.5	Is the message area at least 30 cm^2? (S4.5.1(b)(1)(ii))

The message area consists of the total label area minus the yellow heading area and the pictogram. The pictogram is enclosed on the left side and bottom by the edge of the label and on the top by line that borders the yellow heading area. The right side of the pictogram is defined by a vertical line midway between the rightmost edge of the pictogram and the left most edge of the text, including any bullets. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Driver Side: Length______, Width________

Passenger Side: Length______, Width________

Actual message area __________ cm^2

- [ ] Driver Side, Yes – Pass
- [ ] Driver Side, No – Fail
- [ ] Passenger Side, Yes – Pass
- [ ] Passenger Side, No – Fail

[ ] 3.1.6 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii)

- [ ] Driver Side, Yes – Pass
- [ ] Driver Side, No – Fail
- [ ] Passenger Side, Yes – Pass
- [ ] Passenger Side, No – Fail

[ ] 3.1.7 Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii))

Actual diameter__________mm

- [ ] Driver Side, Yes – Pass
- [ ] Driver Side, No – Fail
- [ ] Passenger Side, Yes – Pass
- [ ] Passenger Side, No – Fail

[X] 3.2 Vehicles certified to meet the requirements of S19, S21, and S23 on 9/1/03 and later. (S4.5.1(b)(3))

[X] 3.2.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(b)(3)) (3/19/01 legal interpretation to Todd Mitchell)

- [X] Driver Side, Yes – Pass
- [ ] Driver Side, No – Fail
- [X] Passenger Side, Yes – Pass
- [ ] Passenger Side, No – Fail

X 3.2.2 Does the label conform in content to the label shown in Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) (Vehicles without back seats may omit the statement: “The back seat is the safest place for children.” (S4.5.1(b)(3)(iv)) Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement “Never put a rear-facing child seat in the front.”(S4.5.1(b)(3)(v))

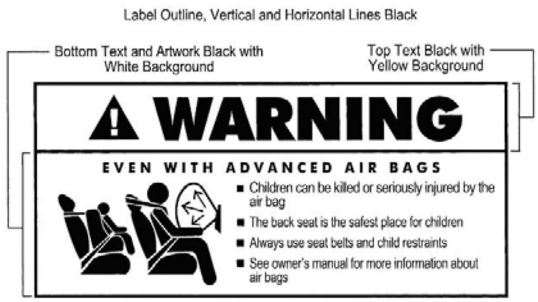


Figure 8. Sun Visor Label Visible when Visor is in Down Position.

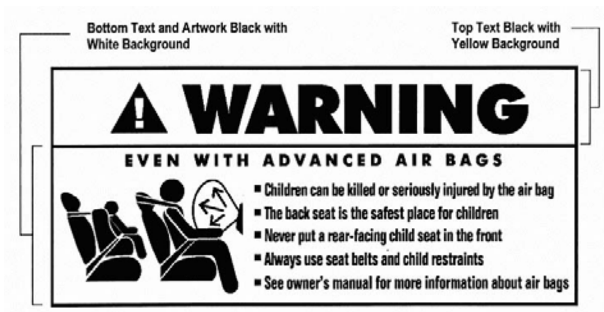


Figure 11. Sun Visor Label Visible when Visor is in Down Position.

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.2.3 Is the label heading area yellow with the word “WARNING” and the alert symbol in black? (S4.5.1(b)(3)(i))

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.2.4 Is the message area white with black text? (S4.5.1(b)(3)(ii))

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.2.5 Is the message area at least 30 cm^2? (S4.5.1(b)(3)(ii)) The message area consists of the total label area minus the yellow heading area and the pictogram. The pictogram is enclosed on the left side and bottom by the edge of the label. The top edge of the pictogram area is defined by a horizontal line midway between the uppermost edge of the pictogram and the lowermost edge of the text. The right side of the pictogram is defined by a vertical line midway between the rightmost edge of the pictogram and the left most edge of the text, including any bullets. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Driver Side: Length 8.0 cm, Width 4.4 cm

Passenger Side: Length 8.0 cm, Width 4.4 cm

Actual message area 35.2 cm^2

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.2.6 Is the pictogram black on a white background? (S4.5.1(b)(3)(iii))

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.2.7 Is the pictogram at least 30 mm (1.2 inches) in length? (S4.5.1(b)(3)(iii))

Driver Side: Length 45 mm

Passenger Side: Length 45 mm

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.3 Is the same side of the sun visor that contains the air bag warning label free of other information with the exception of the air bag maintenance label and/or the rollover-warning label? (S4.5.1(b)(5)(i))

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 3.4 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label and/or the rollover-warning label? (S4.5.1(b)(5)(ii))

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X	3.5	Does the driver side visor contain a rollover-warning label on the same side of the visor as the air bag warning label?

__ Yes, go to 3.6.1

X No, go to 4 (skipping 3.5.1 through 3.5 3)

	3.5.1	Are both the rollover-warning label and the air bag warning label surrounded by a continuous solid-lined border?

___ Yes, go to 3.5.2 and skip 3.5.3

__ No, go to 3.5.3 and skip 3.5..2

	3.5.2	Is the shortest distance from the border of the rollover label to the border of the air bag warning label at least 1 cm? (575.105 (d)(1)(iv)(B))

______________ actual distance

	3.5.3	Is the shortest distance from any of the lettering or graphics on the rollover-warning label to any of the lettering or graphics of the air bag warning label at least 3 cm? (575.105 (d)(1)(iv)(A))

__________actual distance
__Yes-Pass __**No-FAIL**

X	4.	Air Bag Alert Label (S4.5.1(c) (A "Rollover Warning Label" or "Rollover Alert Label" may be on the same side of the driver's sun visor as the "Air Bag Alert Label." 575.105(d))
X	4.1	Is the sun visor warning label visible when the sun visor is in the stowed position?

	If yes for driver and passenger, go to 5.
	Driver Side, Yes
X	Driver Side, No
	Passenger Side, Yes
X	Passenger Side, No

X	4.2	Is the air bag alert label permanently affixed (including permanent marking on the visor material or molding into the visor material) to the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(c)) (3/19/01 legal interpretation to Todd Mitchell)

	Driver Side, Yes – Pass
X	Driver Side, No – **Fail**
	Passenger Side, Yes – Pass
X	Passenger Side, No – **Fail**

X	4.3	Is the air bag alert label visible when the visor is in the stowed position? (S4.5.1(c))

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 4.4 Does the label conform in content to the label shown in Figure 6C? (S4.5.1(c))

Figure 6c. Sun Visor Label Visible When Visor is in Up Position.

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 4.5 Is the message area black with yellow text? (S4.5.1(c)(1)

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 4.6 Is the message area at least 20 cm^2? (S4.5.1(c)(1)) The message area consists of the black part of the label.

Driver Side: Length 9.2 cm, Width 2.3 cm
Passenger Side: Length 9.2 cm, Width 2.3 cm
Actual message area 21.1 cm^2

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 4.7 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2))

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 4.8 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2))

Driver Side Diameter 20 mm

Passenger Side Diameter 20 mm

- X Driver Side, Yes – Pass
- Driver Side, No – Fail
- X Passenger Side, Yes – Pass
- Passenger Side, No – Fail

X 5. Label on the Dashboard

X 5.1 Is the vehicle certified to meet the requirements of S19, S21, and S23? (Obtain answer from COTR) (S4.5.1(e)(3))

- X Yes, go to 5.1.1 and **skip 5.2**
- No, go to 5.2, skipping 5.1.1 through 5.1.6

X 5.1.1 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(3))

- X Yes – Pass
- No – Fail

X 5.1.2 Is the label clearly visible from all front seating positions? (S4.5.1(e)(3))

- X Yes – Pass
- No - Fail

X 5.1.3 Does the label conform in content to the label shown in Figure 12? (S4.5.1(e)(3)) **Vehicles without back seats may omit the statement: "The back seat is the safest place for children." Vehicles without back seats or too small to accommodate a rear-facing child restraint consistent with S4.5.4.1 as determined in DATA SHEET 7 may omit the statement "Never put a rear-facing child seat in the front." (S4.5.1(e)(3)(iii)))**

- X Yes – Pass
- No - Fail

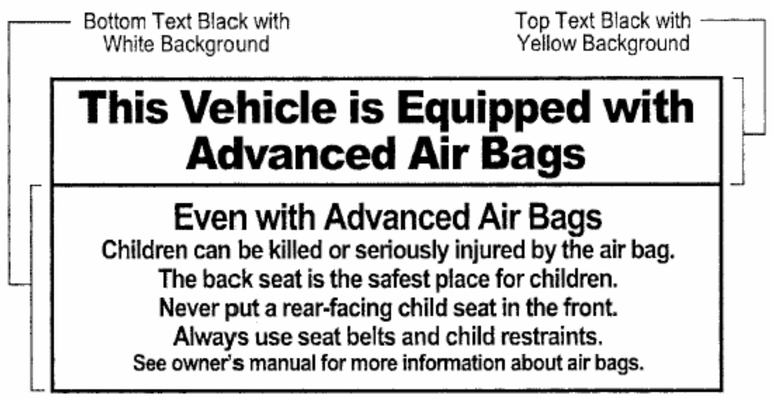


Figure 12. Removable Label on Dash.

X 5.1.4 Is the heading area yellow with black text? (S4.5.1(e)(3)(i)

- X Yes – Pass
- No - Fail

X 5.1.5 Is the message white with black text? (S4.5.1(e)(3)(ii))

- X Yes – Pass
- No - Fail

X	5.1.6	Is the message area at least 30 cm^2? (S4.5.1(e)(3)(ii)) The message area consists of the total label area minus the yellow heading area. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Length 9.5 cm Width 3.8 cm

Actual message area 36.1cm^2

- [X] Yes – Pass
- [ ] No - Fail

[ ] 5.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(1))

- [ ] Yes – Pass
- [ ] No - Fail

[ ] 5.2.1 Is the label clearly visible from all front seating positions? (S4.5.1(e)(1))

- [ ] Yes – Pass
- [ ] No - Fail

[ ] 5.2.2 Does the label conform in content to the label shown in Figure 7? (S4.5.1(e)(1)(iii)) Vehicles without back seats may omit the statement: “The back seat is the safest place for children.” (S4.5.1(e)(1)(iii))

- [ ] Yes – Pass
- [ ] No - Fail

Figure 7. Removable Label on Dash.

[ ] 5.2.3 Is the heading area yellow with the word “WARNING” and the alert symbol in black? (S4.5.1(e)(1)(i)

- [ ] Yes – Pass
- [ ] No - Fail

[ ] 5.2.4 Is the message white with black text? (S4.5.1(e)(1)(ii))

- [ ] Yes – Pass
- [ ] No - Fail

[ ] 5.2.5 Is the message area at least 30 cm^2? (S4.5.1(e)(1)(ii)) The message area consists of the total label area minus the yellow heading area. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Length________, Width________

Actual message area ___________ cm^2

- [ ] Yes – Pass
- [ ] No - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: _____10/3/05_____

DATA SHEET 6

FMVSS 208 READINESS INDICATOR (S4.5.2)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation to Lawrence F. Hennegerger on behalf of Breed)

[X] 1. Is the system totally mechanical? If Yes, this data sheet is complete.
- [ ] Yes
- [X] No

[X] 2. Describe the location of the readiness indicator: *Instrument Panel (lower right)*

[X] 3. Is the readiness indicator clearly visible to the driver?
- [X] Yes – Pass
- [ ] No - Fail

[X] 4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided on a label or in the owner's manual?
- [X] Yes – Pass
- [ ] No - Fail

[X] 5. Does the vehicle have an on-off switch for the passenger air bag?
- [ ] If Yes, go to 6
- [X] If No, this form is complete.

[ ] 6. Is the air bag readiness indicator off when the passenger air bag switch is in the off position?
- [ ] Yes – Pass
- [ ] No - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 7

PASSENGER AIR BAG MANUAL CUT-OFF DEVICE (S4.5.4)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

X	1.	Is the vehicle equipped with an on-off switch that deactivates the air bag installed at the right front outboard seating position?
		☐ Yes, go to 2
		X No, this sheet is complete
	2.	Does the vehicle have any forward-facing rear designated seating positions? (S4.5.4.1(a))
		☐ Yes, go to 3
		☐ No, go to 4
	3.	Verification there is room for a child restraint in the rear seat behind the driver's seat. (S4.5.4(b))
	3.1	Using all the controls that affect the fore-aft movement of the seat, move the seat to the rearmost position. Mark this position.
		☐ N/A, the seat does not have fore-aft adjustment
	3.2	Using all the controls that affect the fore-aft movement of the seat, move the seat to the foremost position. Mark this position.
		☐ N/A, the seat does not have fore-aft adjustment
	3.3	Move the seat to the middle of the foremost and rearmost positions. (S8.1.2)
		☐ N/A, the seat does not have a fore-aft adjustment
	3.4	If the driver's seat height is adjustable, use all the controls that affect height to put it in the lowest position while maintaining the middle fore-aft position. (S8.1.2)
		☐ N/A, No seat height adjustment
	3.5	Position the driver's seat adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
		☐ N/A, No lumbar adjustment
	3.6	The driver's seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1(b) and S8.1.3)
		☐ N/A, No seat back angle adjustment
		☐ Manufacturer's design driver's seat back angle ______________
		☐ Tested driver's seat back angle ______________
	3.7	Is the driver seat a bucket seat?
		__ Yes, go to 3.7.1 and skip 3.7.2.
		__ No, go to 3.7.2 and skip 3.7.1.
	3.7.1	Bucket seats:
	3.7.1.1	Locate and mark a vertical Plane B through the longitudinal centerline of the driver's seat cushion. The longitudinal centerline of a bucket seat cushion is determined at SgRP. (S16.3.1.10) (S4.5.4.1(b)(1))

3.7.1.2 Locate the longitudinal horizontal line in plane B that is tangent to the highest point of the rear seat cushion behind the driver's seat. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the driver's seat.

_____ mm distance
__less than 720 mm – Pass
__more than 720 mm – **FAIL**
Go to 4

3.2 Bench seats (including split bench seats):

3.7.2.1 Locate and mark a vertical Plane B through the center of the steering wheel parallel to the vehicle longitudinal centerline. (S4.5.4.1(b)(2))

3.7.2.2 Locate the longitudinal horizontal line in plane B that is tangent to the highest point of the rear seat cushion. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the front seat.

_____ mm distance
__less than 720 mm – Pass
__more than 720 mm - **FAIL**
Go to 4

4. Does the device turn the air bag on and off using the vehicle's ignition key? (S4.5.4.2)

Yes – Pass
No – Fail

5. Is the on-off device separate from the ignition switch? (S4.5.4.2)

Yes – Pass
No – Fail

6. Is there a telltale light that comes on when the passenger air bag is turned off? (S4.5.4.2)

Yes – Pass
No – Fail

7. Telltale light (S4.5.4.3)

7.1 Is the light yellow? S4.5.4.3(a))

Yes – Pass
No – Fail

7.2 Are the words "PASSENGER AIR BAG OFF" or "PASS AIR BAG OFF" (S4.5.4.3(b))

7.2.1 on the telltale?

Yes – Pass, go to 7.3
No – go to 7.2.2

7.2.2 within 25 mm of the telltale?

Measurement from the edge of the telltale light (mm):

Yes – Pass
No – Fail

7.3 Does the telltale remain illuminated while the air bag is turned off? (S4.5.4.3c)) (Leave the air bag off for 5 minutes.)

Yes – Pass
No – Fail

7.4 Is the telltale illuminated while the air bag is turned on? (S4.5.4.3(d))

- Yes – Fail
- No – Pass

7.5 Is the telltale combined with the air bag readiness indicator? (S4.5.4.3(e))

- Yes – Fail
- No – Pass

8. Owner's Manual

8.1 Does the owner's manual contain complete instructions on the operation of the on-off switch? (S4.5.4.4(a))

- Yes – Pass
- No – Fail

8.2 Does the owner's manual contain a statement that the on-off switch should only be used when a member of one of the following risk groups is occupying the right front passenger seating position? (S4.5.4.4(b))

Infants:	there is no back seat
	the rear seat is too small to accommodate a child restraint
	there is a medical condition that must be monitored constantly
Children aged 1 to 12:	there is no back seat
	space is not always available in the rear seat
	there is a medical condition that must be monitored constantly
Medical condition:	medical risk causes special risk for passenger
	greater risk for harm than with the air bag on

- Yes – Pass
- No – Fail

8.3 Does the owner's manual contain a warning about the safety consequences of using the on-off switch at other times?

- Yes – Pass
- No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Front Passenger

[ ]		N/A – no retractor is at this position
[ ]		N/A – the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: FULL REAR (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position. [X] N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? [X] Yes, go to 8.1 [ ] No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) [X] Yes – Pass [ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 60 ½ inch

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 10°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 24 ½ inch

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 25 lbs./sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 25 inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 10° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 21 ¼ inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 25 lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 21 ½ inches (S7.1.1.5(c)(6))

X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

X 14-13 = 25 - 24 ½ = 1/2 inch

X 18-17 = 21 ½ - 21 ¼ = 1/4 inch

X Yes – Pass

No – Fail

X 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

X 10-14 = 60 ½ - 25 = 35 ½ inch

X 10-18 = 60 ½ - 21 ½ = 39 inch

X Yes – Pass

No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

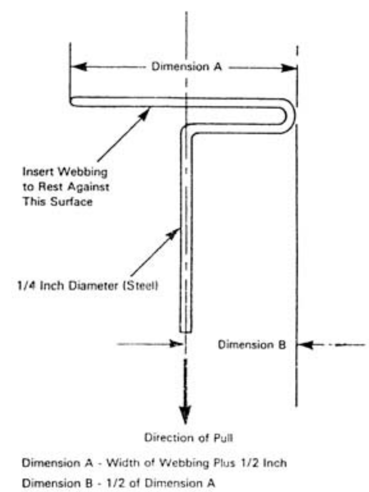


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Left Rear Passenger

[ ] N/A – no retractor is at this position

[ ] N/A – the retractor is an automatic locking retractor ONLY

[X] 1. Record test fore-aft seat position: (S7.1.1.5(c)(1)) (Any position is acceptable) FIXED

[X] 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 4. Place any adjustable seat belt anchorage in the lowest adjustment position.

- [X] N/A The anchorage is not adjustable.

[X] 5. Buckle the seat belt. (S7.1.1.5(c)(1))

[X] 6. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

[X] 7. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

[X] 8. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

- [X] Yes, go to 8.1
- [ ] No, go to 9.

[X] 8.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

- [X] Yes – Pass
- [ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 61 ½ inch

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 10°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 26 inches

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 25lbs/sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 27 1/8 inch

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 10° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 19 1/8 inch

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 25 lbs/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 19 ¾ inch (S7.1.1.5(c)(6))

X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

X 14-13 = 27 1/8 – 26 = 1 1/8 inch

X 18-17 = 19 ¾ - 19 1/8 = 5/8 inch

- [X] Yes – Pass
- [ ] No – Fail

X 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

X 10-14 = 61 ½ - 27 1/8 = 34 3/8 inch

X 10-18 = 61 ½ - 19 ¾ = 41 ¾ inch

- [X] Yes – Pass
- [ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

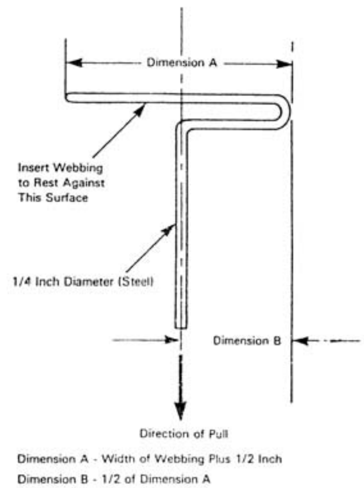


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Center Rear Passenger

[ ]		N/A – no retractor is at this position
[ ]		N/A – the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: NOT ADJUSTABLE (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position. [X] N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? [X] Yes, go to 8.1 [ ] No, go to 9
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) [X] Yes – Pass [ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 75 inches

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 12°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 26 ¼ inch

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 25 lbs/sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 27 inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 12° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 19 inches

[X] [ ] 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 25 lbs/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 20 inches (S7.1.1.5(c)(6))

[X] 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

[X] 14-13 = 27 - 26 ¼ = ¾ inch

[X] 18-17 = 20 - 19 = 1 inch

[X] Yes – Pass

[ ] No – Fail

[X] 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

[X] 10-14 = 75 – 27 = 48 inches

[X] 10-18 = 75 – 20 = 55 inches

[X] Yes – Pass

[ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

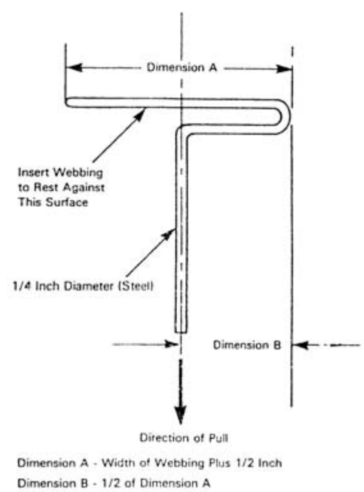


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Right Rear Passenger

		N/A – no retractor is at this position
		N/A – the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: FIXED (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a)) [X] Yes – Pass [ ] No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position. [X] N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing? [X] Yes, go to 8.1 [ ] No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) [X] Yes – Pass [ ] No – Fail

X	9.	Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))
X	10.	Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X		Measured distance between A and B (inches): 62 ½ inches
X	11.	Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))
X	12.	To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))
X		Measured force application angle (Spec. 5-15 degrees): 10°
X	13.	Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))
X		Measured distance between A and B (inches): 25 inches
X	14.	Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))
X		Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 25 lbs/sec
X		Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 26 inches
X	15.	Let the seat belt webbing retract to its minimum length with the seat belt still buckled
X	16.	To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle 10° (spec. 5 - 15 degrees)
X	17.	Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B 19 inches
X	18.	Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5)) Record onset rate 25 lbs/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B 19 ½ inches (S7.1.1.5(c)(6))

X	19.	Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))
X		14-13 = 26 - 25 = 1 inch
X		18-17 = 19 ½ - 19 = ½ inch

- [X] Yes – Pass
- [ ] No – Fail

X	20.	Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))
X		10-14 = 62 ½ - 26 = 36 ½ inches
X		10-18 = 62 ½ - 19 ½ = 43 inches

- [X] Yes – Pass
- [ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

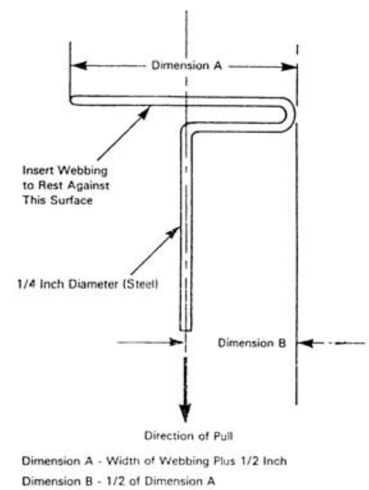


Figure 5. - Webbing Tension Pull Device

DATA SHEET 9

FMVSS 208 SEAT BELT WARNING SYSTEM CHECK (S7.3)

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 10/3/05

X	1.	The occupant is in the driver's seat.
X	2.	The seat belt is in the stowed position.
X	3.	The key is in the "on" or "start" position.
X	4.	The time duration of the audible signal beginning with key "on" or "start" is
X		Seconds: 6
X	5.	The occupant is in the driver's seat.
X	6.	The seat belt is in the stowed position.
X	7.	The key is in the "on" or "start" position.
X	8.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: *Stays On*
X	9.	The occupant is in the driver's seat.
X	10.	The seat belt is in the latched position and with at least 4 inches of belt webbing extended.
X	11.	The key is in the "on" or "start" position.
X	12.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: 0
X	13.	Complete the following table with the data from 4, 8, and 12 to determine which option is used.

		Warning light	Warning light specification	Audible signal	Audible signal specification*
S7.3 (a)(1)	Belt stowed & key on or start	Item 8: Stays On	60 seconds minimum	Item 4: 6	4 to 8 seconds
S7.3 (a)(2)	Belt latched & key on or start	Item 12: 0	4 to 8 seconds		
	Belt stowed & key on or start	Item 8: Stays On	4 to 8 seconds	Item 4: 6	4 to 8 seconds

* 49 USCS @ 30124 does NOT allow an audible signal to operate for more than 8 seconds.
A voluntary audible signal after the 4 to 8 second required signal may be provided. It must be differentiated from the required signal (5/25/2001 legal interpretation to Longacre and Associates).

[X] 14. The seat belt warning system meets the requirements of (manufacturers may comply with either section)

- [X] S7.3 (a)(1)
- [ ] S7.3 (a)(2)
- [ ] FAIL – does not meet the requirements of either option

[X] 15. Note wording of visual warning: (S7.3(a)(1) and S7.3(a)(2))

- [ ] Fasten seat belts
- [ ] Fasten belts
- [X] Symbol 101 - 
- [ ] FAIL – does not use any of the above wording or symbol

REMARKS:

I certify that I have read and performed each instruction.

Signature: Rick Kosinski

Date: 10/3/05

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?

- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)

- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?

- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?

- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):

- [X] 0.0 to 0.7 pounds – Pass 0.44 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: _____10/3/05_____

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Center Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?

- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)

- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?

- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?

- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):

- [X] 0.0 to 0.7 pounds – Pass 0.42 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: _____10/3/05_____

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?

- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)

- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?

- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?

- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):

- [X] 0.0 to 0.7 pounds – Pass 0.40 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: _____10/3/05_____

DATA SHEET 11

LATCH PLATE ACCESS (S7.4.4)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Not Applicable For Any Position - Passenger Car

1. Put the seat in the forwardmost fore-aft and full down height position determined in Data Sheet 14.2. (S10.7)
2. Put the seat back angle in the position determined in Data Sheet 14.2.
3. Position the test dummy using the procedures in Appendix F. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix F positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**
4. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.
5. Attach the inboard reach string to the base of the head following the instructions on Figure 3.
6. Attach the outboard reach string to the torso sheath following the instructions on Figure 3.
7. Place the latch plate in the stowed position.
8. Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

   Yes – Pass

   No
9. Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate arcs of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?

   Yes – Pass

   No
10. Is the latch plate within the inboard (item 10) or outboard (item 11) reach envelope?

    Yes – Pass

    No – Fail
11. Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?

    Yes – Pass

    No – Fail

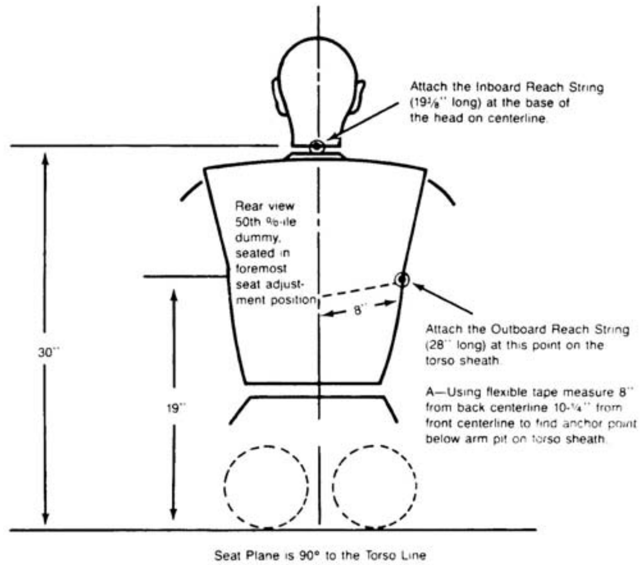


Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

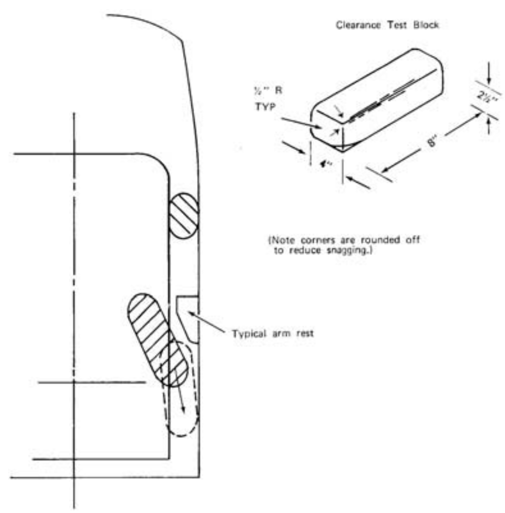


Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

REMARKS:

I certify that I have read and performed each instruction.

Signature: Rick Kosinski

Date: 10/3/05

DATA SHEET 12

SEAT BELT RETRACTION (S7.4.5)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Not Applicable For Any Position - Passenger Car
GVWR:	

[X] 1. Is the vehicle a passenger car or walk-in van-type vehicle?

- [X] Yes, this form is complete
- [ ] No

[ ] 2. Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2. (S8.1.2)

[ ] 3. Put the seat back angle in the position determined in Data Sheet 14.2. (8.1.3)

[ ] 4. Position the Part 572 Subpart E test dummy according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

[ ] 5. Fasten the seat belt around the dummy.

[ ] 6. Remove all slack from the lap belt portion. (S10.9)

- [ ] N/A, the seat does not have a fore-aft adjustment

[ ] 7. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)

[ ] 8. Apply a 2 to 4 pound tension load to the lap belt. (S10.9)

[ ] **Pound load applied:**

[ ] 9. Is the belt system equipped with a tension relieving device?

- [ ] __Yes, continue
- [ ] __No, go to 12

[ ] 10. Introduce the maximum amount of slack into the upper torso bet that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).

[ ] 11. Check the statement that applies to this test vehicle:

[ ] 11.1 Check the statement that applies to this test vehicle:
The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.2

11.2 The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.3

11.3
- [ ] Neither 11.1 nor 11.2 apply.
- [ ] Fail

☐ 12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

- ☐ Yes – Pass
- ☐ No – Fail

☐ 13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

- ☐ N/A
- ☐ Yes – Pass
- ☐ No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Rear Passenger

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))

- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))

- [X] Yes, go to 5
- [ ] No, this form is complete

[X] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))

- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.

- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

[X] 6. Are the remaining two seat belt parts accessible under normal conditions?

- [X] Yes – Pass
- [ ] No – Fail

[X] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- [ ] Yes – Pass
- [ ] No – Fail
- [X] N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Center Rear Passenger

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- [ ] Yes, this form is complete
- [X] No, go to 2

X 2. Is the seat removable? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 3

X 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 4

X 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- [X] Yes, go to 5
- [ ] No, this form is complete

X 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.
- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

X 6. Are the remaining two seat belt parts accessible under normal conditions?
- [X] Yes – Pass
- [ ] No – Fail

X 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- [X] Yes – Pass
- [ ] No – Fail

X	8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X	9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X	10.	Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- [ ] Yes – Pass
- [ ] No – Fail
- [X] N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	10/3/05
Test Technician:	Nick Kosinski		

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Rear Passenger

X 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))

- [ ] Yes, this form is complete
- [X] No, go to 2

X 2. Is the seat removable? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 3

X 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 4

X 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))

- [X] Yes, go to 5
- [ ] No, this form is complete

X 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))

- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.

- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

X 6. Are the remaining two seat belt parts accessible under normal conditions?

- [X] Yes – Pass
- [ ] No – Fail

X 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X	8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X	9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

X	10.	Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- [ ] Yes – Pass
- [ ] No – Fail
- [X] N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 10/3/05

DATA SHEET 14

MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	2/15/06
Test Technician:	Brian Roach		

DATA SHEET 14.1

MARKING OF REFERENCE POINTS FOR 5th FEMALE

X Driver Seat __Passenger Seat

1. Seat Position

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)
__ N/A – No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
X N/A – No additional support adjustment

X 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
X N/A – No adjustable leg support system

X 1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)

X 1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)

X 1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)

X 1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20..1.9.3)
_X N/A – No independent fore-aft seat cushion adjustment

X 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)
Maximum angle 4.3 Nose up
Minimum angle 7.1 Nose down
Mid-angle 1.4 Nose down

X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1)
__N/A – No seat height adjustment

X 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.

X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to **mark** for future reference the fore-aft seat positions. **Mark** each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and **mark** each detent. For power seats, **mark** only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.

X 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.

X 1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)

__N/A – No seat height adjustment. Go to 1.18

X 1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.

X 1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)

X 1.16 Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)

X 1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)

X 1.18. Visually **mark** for future reference the seat back angle at the manufacturer's nominal design riding position for a **50th percentile adult male** in the manner specified by the manufacturer for the rearmost, mid, and foremost seat positions. (S20.1.9.5, S22.1.7.5, S22.4.2.1, S22.4.3.1, S24.1.2, S24.4.2.1, S26.2.3, S26.3.1)

__ N/A – No seat back angle adjustment

Manufacturer's design seat back angle 19.5 Degrees

X 1.19. Is the seat a bucket seat?

X Yes, go to 1.20 and skip 1.21

__No, go to 1.21 and skip 1.20

X 1.20 Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

__1.21 Bench seats (complete ONLY the one that is applicable to the seat being marked):

__1.21.1 Driver Seat

Locate and **mark** for future reference the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface.

__1.21.2 Passenger Seat

Locate and **mark** for future reference the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S20.2.1.3, S22.2.1.3, S24.2.3, S20.4.4, S22.2.2.1(b), S22.2.2.3(b), S22.2.2.4(a), S22.2.2.5(a), S22.2.2.6(a), S22.2.2.7(a), S24.2.3(a))

Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel. _______

Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B for suppression.) _______

2. Head Restraint Position

__N/A Vehicle contains automatic head restraints.

__N/A, there is no head restraint adjustment

X 2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6 S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

X 2.2 All adjustments of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

X 2.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance. (S16.3.4.3)

Vertical height of head restraint 200 mm

Mid-point height 100 mm

Brian Roach ______________________________ _____2/15/06_____

I certify that I have read and performed each instruction. Date

DATA SHEET 14.1

MARKING OF REFERENCE POINTS FOR 5th FEMALE

__Driver Seat X Passenger Seat

1. Seat Position

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)

__ N/A – No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)

X N/A – No additional support adjustment

X 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)

X N/A – No adjustable leg support system

X 1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)

X 1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)

X 1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)

X 1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20..1.9.3)

X N/A – No independent fore-aft seat cushion adjustment

X 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)

Maximum angle 4.3 Nose up
Minimum angle 6.9 Nose down
Mid-angle 1.3 Nose down

X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1)

__N/A – No seat height adjustment

X 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.

X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to **mark** for future reference the fore-aft seat positions. **Mark** each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and **mark** each detent. For power seats, **mark** only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.

X 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.

X 1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)

__N/A – No seat height adjustment. Go to 1.18

X 1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.

X 1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)

X 1.16 Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)

X 1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)

X 1.18. Visually **mark** for future reference the seat back angle at the manufacturer's nominal design riding position for a **50th percentile adult male** in the manner specified by the manufacturer for the rearmost, mid, and foremost seat positions. (S20.1.9.5, S22.1.7.5, S22.4.2.1, S22.4.3.1, S24.1.2, S24.4.2.1, S26.2.3, S26.3.1)

__ N/A – No seat back angle adjustment

Manufacturer's design seat back angle 19.5 Degrees

X 1.19. Is the seat a bucket seat?

X Yes, go to 1.20 and skip 1.21

__No, go to 1.21 and skip 1.20

X 1.20 Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

__1.21 Bench seats (complete ONLY the one that is applicable to the seat being marked):

__1.21.1 Driver Seat

Locate and **mark** for future reference the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface.

__1.21.2 Passenger Seat

Locate and **mark** for future reference the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S20.2.1.3, S22.2.1.3, S24.2.3, S20.4.4, S22.2.2.1(b), S22.2.2.3(b), S22.2.2.4(a), S22.2.2.5(a), S22.2.2.6(a), S22.2.2.7(a), S24.2.3(a))

Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel. _______

Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B for suppression.) _______

2. Head Restraint Position

__N/A Vehicle contains automatic head restraints.

__N/A, there is no head restraint adjustment

X 2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6 S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

X 2.2 All adjustments of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

X 2.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance. (S16.3.4.3)

Vertical height of head restraint 200 mm

Mid-point height 100 mm

Brian Roach ______________ ______2/15/06______

I certify that I have read and performed each instruction. Date

DATA SHEET 14.3

MARKING OF REFERENCE POINTS FOR STEERING WHEEL

X 1. Is the steering wheel adjustable up and down and/or in and out?
X Yes – go to 2
__No – this form is complete

X 2. Find and **mark** for future reference each up and down position. Label three of the positions with the following: H for highest, M for mid-position (if there is no mid-position, label the next lowest adjustment position), and L for lowest.
__N/A – steering wheel is not adjustable up and down

X 3. Find and **mark** for future references each in and out position. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the next rearmost adjustment position), and R for rearmost.
__N/A – steering wheel is not adjustable in and out.

I certify that I have read and performed each instruction.

Signature: Brian Roah

Date: 2/15/06

DATA SHEET 14.4

MARKING OF REFERENCE POINTS FOR DRIVER LOW RISK DEPLOYMENT

X Position 1 X Position 2

X 1. Position the steering wheel so the front wheels are in the straight-ahead position. (S26.2.1)

X 2. Position any adjustable parts of the steering controls to the mid-position as determined in Data Sheet 14.3 above. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.2.1)

X 3. Locate and **mark** the point that is defined by the intersection of the steering wheel cover and a line between the volumetric center of the smallest volume that can encompass the folded undeployed air bag and the volumetric center of the static fully inflated air bag. The vertical plane parallel to the vehicle longitudinal centerline through this point is referred to as "Plane E." (Check determination method below.) (S26.2.2)
Measurements with respect to measurement reference points:

____

The longitudinal centerline of the air bag was used.______________________________

____

Point determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
OR
X Point determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

X 4. Locate the highest point of the air bag module cover. The horizontal plane through this point is referred to as "Plane F." (Check determination method below.) (S26.2.6)
Measurements with respect to measurement reference points:

____

The top of the air bag module cover was used. ______________________________

____

__Point determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
OR
X Point determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

Brian Roach ______________________________ 2/15/06_____

I certify that I have read and performed each instruction. Date

DATA SHEET 14.5

MARKING OF REFERENCE POINTS FOR PASSENGER LOW RISK DEPLOYMENT

X Position 1   X Position 2

X Locate and **mark** the point that is defined by the intersection of the instrument panel and a line between the volumetric center of the smallest volume that can encompass the folded undeployed air bag and the volumetric center of the static fully inflated air bag. (S22.4.1.2, S24.4.1.2) The horizontal plane thru this point is referred to as "Plane C" (S22.4.1.4 and S24.4.1.4). The vertical plane parallel to the vehicle longitudinal centerline and through this point is referred to as "Plane D" (S22.4.1.3 and S24.4.1.3). (Check determination method below.) Measurements with respect to measurement reference points:

____

____

____

X Point determined using manufacturer's information supplied by the COTR . (Include manufacturer's information in the test report.) See Appendix D-73

OR

__ Point determined by test lab personnel and approved by the COTR. (Include supporting documentation in the test report.)

Brian Roach   2/15/06

I certify that I have read and performed each instruction.   Date

DATA SHEET 16

AIR BAG SUPPRESSION TELLTALE (S19.2.2)

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Brian Roach

NHTSA No.: C60503
Test Date: 10/25/05

X 1. Is the vehicle certified to any suppression performance standards of FMVSS 208?
X Yes – go to 2
__No – this form is complete

X 2. Does telltale emit yellow light when the air bag is suppressed? (S19.2.2(a))
X Yes - Pass ___**NO – FAIL**

X 3. Are the words "PASSENGER AIR BAG OFF" or "PASS AIR BAG OFF" (S19.2.2(b))

X 3.1 on the telltale? (S19.2.2(b))
X Yes – Pass, go to 4
__No – go to 3.2

__3.2 within 25 mm of the telltale? (S19.2.2(b)) ________mm from the edge of the telltale light
___Yes - Pass ___**NO – FAIL**

X 4. Is the telltale separate from the air bag readiness indicator? (S19.2.2(c))
X Yes - Pass ___**NO – FAIL**

X 5. Is the telltale within the interior of the vehicle? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 6 Is the telltale forward of and above the design H-point of both the driver's and the front outboard passenger's seat when the seats are in their forwardmost seating positions? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 7. Is the telltale away from surfaces that can be used for temporary or permanent storage of objects that could obscure the telltale from either the driver's or front outboard passenger's view? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 8. Is the telltale located so that it is not obscured from the driver or front outboard passenger by a rear-facing child restraint in Appendix A installed in the front outboard passenger seat? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 9. Is the telltale visible or recognizable during the night? (S19.2.2(e))
X Yes - Pass ___**NO – FAIL**

X 10. Is the telltale visible or recognizable during the day? (S19.2.2(e))
X Yes - Pass ___**NO – FAIL**

X 11. If there is a visibility adjustment, do all the adjustment levels make the telltale visible and recognizable? (S19.2.2(g))
X N/A-No visibility adjustment
___Yes - Pass ___**NO – FAIL**

X 12. Does the telltale remain illuminated while the air bag is suppressed? (S19.2.2(h)) (Leave the air bag suppressed for 5 minutes.)
X Yes - Pass ___**NO – FAIL**

X 13. Is the telltale off while the air bag is activated? (S19.2.2(h)) (Leave the air bag activated for 5 minutes.)
X Yes - Pass ___**NO – FAIL**

Brian Roach ______________________ ______10/25/05______

I certify that I have read and performed each instruction. Date

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C60503	TEST DATE:	10/21/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Handle With Care 191
DATE OF MANUFACTURE:	5-26-2000

Base: __On __Off _X_ N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward	128	Suppressed
	Middle	133	Suppressed
	Rearward	132	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C60503	TEST DATE:	10/25/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	First Choice 204
DATE OF MANUFACTURE:	6-20-2000

Base: __On __Off _X_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 80 *	127	Suppressed
	Middle	127	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward 90 *	N/A	N/A
	Middle	N/A	N/A
	Rearward	N/A	N/A
Unbelted Forward Facing	Forward	N/A	N/A
	Middle	N/A	N/A
	Rearward	N/A	N/A

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (0 = Full Forward; 250 = Full Rearward; 250mm total Seat Slide travel)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C60503	TEST DATE:	10/21/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

Base: _X_On ___ Off __N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 40 *	127	Suppressed
	Middle	129	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward 70 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (0 = Full Forward; 250 = Full Rearward; 250mm total Seat Slide travel)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C60503	TEST DATE:	10/21/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

Base: __On _X_Off __N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 25 *	133	Suppressed
	Middle	132	Suppressed
	Rearward	131	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (0 = Full Forward; 250 = Full Rearward; 250mm total Seat Slide travel)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60503	TEST DATE:	10/21/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Base: __On __Off _X_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing	Forward	128	Suppressed
	Middle	128	Suppressed
	Rearward	133	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	128	Suppressed
	Middle	133	Suppressed
	Rearward	134	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Foremost position. (SN506)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60503	TEST DATE:	10/21/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Base: __On __Off _X_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket / Result
Belted Forward Facing	Forward	129	Suppressed
	Middle	130	Suppressed
	Rearward	133	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	127	Suppressed
	Middle	130	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward 25 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (0 = Full Forward; 250 = Full Rearward; 250mm total Seat Slide travel)

DATA SHEET 17 SUMMARY

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60503	TEST DATE:	10/25/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Base: __On __Off _X_ N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket / Result
Belted Forward Facing	Forward	131	Suppressed
	Middle	131	Suppressed
	Rearward	131	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	128	Suppressed
	Middle	132	Suppressed
	Rearward	130	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

DATA SHEET 18 SUMMARY

Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K)
Section A Car Bed

NHTSA No.:	C60503	TEST DATE:	10/25/05
LABORATORY:	MGA	TECHNICIANS:	TB
DUMMY TYPE:	Newborn Infant	DUMMY SERIAL NO.:	003

CAR BED NAME:	Cosco
CAR BED MODEL:	Dream Ride 02-719
DATE OF MANUFACTURE:	6-16-2000

Base: __On __Off _X_N/A-Restraint does not have a removable base
(A car bed with a removable base shall be treated as two separate models, i.e. this form and test procedure will be completed with the base on and then repeated on a new form with the base off.

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Manufacturer's specified anchorage position: Top
Tested anchorage position: Top

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Result
Belted	Forward	Suppressed
	Middle	Suppressed
	Rearward	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Foremost position. (SN506)

DATA SHEET 25 SUMMARY

Low Risk Deployment Tests Using an Unbelted 3-Year-Old
Dummy (Part 572, Subpart P) (S22)
Position 1 – Chest On Instrument Panel (S22.4.2)

NHTSA No.:	C60503	TEST DATE:	2/15/06
LABORATORY:	MGA	TECHNICIANS:	BR
DUMMY TYPE:	3-Year-Old	DUMMY SERIAL NO.:	032

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Tested seat position: Full Aft

Thorax cavity angle: 0.4°
Thigh angle: 57.2°
Point 1 height: 2 mm Below AB Module

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.1

3-Year-Old SN 032 Position 1 (Chest on Instrument Panel) 2-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	570	No Valid Data
Peak Nij (Nte)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Ntf)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Nce)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Peak Nij (Ncf)	1.0	No Valid Data
Time (ms)	NA	No Valid Data
Neck Tension	1130 N	No Valid Data
Neck Compression	1380 N	No Valid Data
Chest g	55 g	No Valid Data
Chest Displacement	34 mm	No Valid Data

Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S4.11(b))
The data is not reported because of noise caused by a dummy grounding problem.

DATA SHEET 26 SUMMARY

Low Risk Deployment Tests Using an Unbelted 3-Year-Old
Dummy (Part 572, Subpart P) (S22)
Position 2 – Head On Instrument Panel (S22.4.3)

NHTSA No.:	C60503	TEST DATE:	6/7/06
LABORATORY:	MGA	TECHNICIANS:	JH/BR
DUMMY TYPE:	3-Year-Old	DUMMY SERIAL NO.:	032

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Tested seat position: Full Forward

Thorax cavity angle: 0.2°
Thigh angle: 12.0°

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.3

3-Year-Old SN 032 Position 2 (Head on Instrument Panel) 6-7-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	570	247
Peak Nij (Nte)	1.0	0.5
Time (ms)	NA	47.7
Peak Nij (Ntf)	1.0	0.6
Time (ms)	NA	10.1
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	20.3
Peak Nij (Ncf)	1.0	0.8
Time (ms)	NA	11.5
Neck Tension	1130 N	380
Neck Compression	1380 N	186
Chest g	55 g	19
Chest Displacement	34 mm	0

Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S4.11(b))

DATA SHEET 27 SUMMARY

Low Risk Deployment Tests Using an Unbelted 6-Year-Old
Dummy (Part 572, Subpart P) (S24)
Position 1 – Chest On Instrument Panel (S24.4.2)

NHTSA No.:	C60503	TEST DATE:	3/29/06
LABORATORY:	MGA	TECHNICIANS:	BS/BR
DUMMY TYPE:	6-Year-Old	DUMMY SERIAL NO.:	155

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Tested seat position: Full Aft

Thorax cavity angle: 6.2°
Point 1 height: 40 mm Below AB Module

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.2

6-Year-Old SN 155 Position 1 (Chest on Instrument Panel) 3-29-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	12
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	98.6
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	13.6
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	1.3
Peak Nij (Ncf)	1.0	0.0
Time (ms)	NA	0.2
Neck Tension	1490 N	407
Neck Compression	1820 N	29
Chest g	60 g	12
Chest Displacement	40 mm	4

Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S4.11(b))

DATA SHEET 28 SUMMARY

Low Risk Deployment Tests Using an Unbelted 6-Year-Old
Dummy (Part 572, Subpart N) (S24)
Position 2 – Head On Instrument Panel (S24.4.3)

NHTSA No.:	C60503	TEST DATE:	5/10/06
LABORATORY:	MGA	TECHNICIANS:	BR/JH
DUMMY TYPE:	6-Year-Old	DUMMY SERIAL NO.:	155

Manufacturer's design seat back angle: 19.5° On Seat Back Frame
Tested seat back angle: 19.5° On Seat Back Frame
Tested seat position: Full Forward

Thorax cavity angle: 26.7°
Thigh angle: 4.6°

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.3

6-Year-Old SN 155 Position 2 (Head on Instrument Panel) 5-10-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	474
Peak Nij (Nte)	1.0	0.8
Time (ms)	NA	32.2
Peak Nij (Ntf)	1.0	0.4
Time (ms)	NA	14.2
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	0.3
Peak Nij (Ncf)	1.0	0.3
Time (ms)	NA	12.2
Neck Tension	1490 N	558
Neck Compression	1820 N	332
Chest g	60 g	10
Chest Displacement	40 mm	2

Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S4.11(b))

DATA SHEET 29 SUMMARY

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female Dummy (Part 572, Subpart O) (S26)
Position 1 - Chin On Module (S26.2)

NHTSA No.:	C60503	TEST DATE:	2/15/06
LABORATORY:	MGA	TECHNICIANS:	BR/BS/DW
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	081

Manufacturer's design seat back angle: 19.5° seat back angle
Tested seat back angle: 19.5° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 20.9°
Thorax cavity angle: 26.9°
Bottom of chin height: 1 mm Above Module

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.0

5th Percentile Female SN 081 Position 1 (Chin On Module) 2-15-05

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	7
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	17.6
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	45.6
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	318.3
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	254.3
Neck Tension	2070 N	564
Neck Compression	2520 N	116
Chest g	60 g	11
Chest Displacement	52 mm	8
Left Femur	6805 N	141
Right Femur	6805 N	36

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 200 ms; Injuries calculated on 0 ms to 325 ms

DATA SHEET 30 SUMMARY

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60503	TEST DATE:	3/29/06
LABORATORY:	MGA	TECHNICIANS:	BR
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	081

Manufacturer's design seat back angle: 19.5° seat back angle
Tested seat back angle: 19.5° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 18.4°
Thorax cavity angle: 24.2°
Chin Point height: 0 mm Below Steering Wheel Target
Note:
The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

*The dummy contacted the windshield with the steering wheel at mid position. The steering controls were adjusted to lower the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. The rear thorax cavity was adjusted along with the steering wheel angle.

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	200.0	200.0

5th Percentile Female SN 081 Position 2 (Chin On Rim) 3-29-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	9
Peak Nij (Nte)	1.0	0.4
Time (ms)	NA	16.2
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	80.0
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	296.2
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	55.7
Neck Tension	2070 N	488
Neck Compression	2520 N	80
Chest g	60 g	24
Chest Displacement	52 mm	16
Left Femur	6805 N	84
Right Femur	6805 N	44

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 200 ms; Injuries calculated on 0 ms to 325 ms

DATA SHEET 32

VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 7/18/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X 1. Fill the transmission with transmission fluid to the satisfactory range.
X 2. Drain fuel from vehicle
X 3. Run the engine until fuel remaining in the fuel delivery system is used and the engine stops.
X 4. Record the useable fuel tank capacity supplied by the COTR
X Useable Fuel Tank Capacity supplied by COTR: 80.0 liters (21.13 gallons)
X 5. Record the fuel tank capacity supplied in the owner's manual.
X Useable Fuel Tank Capacity in owner's manual: 80.0 liters (21.13 gallons)
X 6. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," or gasoline, fill the fuel tank.
X Amount Added: 80.0 liters (21.13 gallons)
X 7. Fill the coolant system to capacity.
X 8. Fill the engine with motor oil to the Max. mark on the dip stick.
X 9. Fill the brake reservoir with brake fluid to its normal level.
X 10. Fill the windshield washer reservoir to capacity.
X 11. Inflate the tires to the tire pressure on the tire placard. If no tire placard is available, inflate the tires to the recommended pressure in the owner's manual.

Tire placard pressure:	RF:	28 psi	LF:	28 psi	RR:	30 psi	LR:	30 psi
Owner's manual pressure:	RF:	28 psi	LF:	28 psi	RR:	30 psi	LR:	30 psi
Actual inflated pressure:	RF:	28 psi	LF:	28 psi	RR:	30 psi	LR:	30 psi

X 12. Record the vehicle weight at each wheel to determine the unloaded vehicle weight (UVW), i.e. "as delivered" weight).

Right Front (kg):	463.6	Right Rear (kg):	410.5
Left Front (kg):	424.1	Left Rear (kg):	438.6
Total Front (kg):	887.7	Total Rear (kg):	849.1
% Total Weight:	51.1	% Total Weight:	48.9
UVW = TOTAL FRONT PLUS TOTAL REAR (KG):			1736.8

X 13. UVW Test Vehicle Attitude: (All dimensions in millimeters)
X 13.1 Mark a point on the vehicle above the center of each wheel.
X 13.2 Place the vehicle on a level surface.

X	13.3	Measure perpendicular to the level surface to the 4 points marked on the body and record the measurements

RF:	679	LF:	693	RR:	684	LR:	672

X	14.	Calculate the Rated Cargo and Luggage Weight (RCLW): 120 kg
X	14.1	Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?
X		[X] Yes, go to 14.3
		[ ] No, go to 14.2
	14.2	VCW = Gross Vehicle Weight – UVW

VCW = __________ - __________ = __________

X	14.3	VCW = 460 kg (1010 lbs)
X	14.4	Does the certification or tire placard contain the Designated Seating Capacity (DSC)?
		[X] Yes, go to 14.6
		[ ] No, go to 14.5 and skip 14.6
	14.5	DSC = Total number of seat belt assemblies = _________
X	14.6	DSC = 5
X	14.7	RCLW = VCW – (68 kg x DSC) = 460 kg - (68 kg x 5) = 120 kg
X	14.8	Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?
		[ ] Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)
		[X] No, use the RCLW calculated in 14.7
X	15.	Fully Loaded Weight (100% fuel fill): 1952.7 kg
X	15.1	Place the appropriate test dummy in both front outboard seating positions.

Driver: X 5th female __ 50th male
Passenger: X 5th female __ 50th male

X	15.2	Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.
X	15.3	Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))
X	15.4	Record the vehicle weight at each wheel to determine the Fully Loaded Weight.

Right Front (kg):	475.8	Right Rear (kg):	503.5
Left Front (kg):	439.1	Left Rear (kg):	534.3
Total Front (kg):	914.9	Total Rear (kg):	1037.8
% Total Weight:	46.9	% Total Weight:	53.1
% GVW	45.6	% GVW	54.4
(% GVW = Axle GVW divided by Vehicle GVW)			
Fully Loaded Weight = Total Front Plus Total Rear (kg):			1952.7

X	16.	Fully Loaded Test Vehicle Attitude: (All dimensions in millimeters)
X	16.1	Place the vehicle on a level surface.

X	16.2	Measure perpendicular to the level surface to the 4 points marked on the body (see 13.1 above) and record the measurements

RF:	692	LF:	701	RR:	662	LR:	655

X	17.	Drain the fuel system
X	18.	Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," fill the fuel tank to 92 - 94 percent of useable capacity.
X		Fuel tank capacity x .94 = 80.0 liters (21.13 gallons) x .94 = 75.2 liters (19.9 gallons)
X		Amount added 75.0 liters (19.82 gallons) 93.8%
X	19.	Crank the engine to fill the fuel delivery system with Stoddard solvent
X	20.	Calculate the test weight range.
X	20.1	Calculated Weight = UVW (see 12 above) + RCLW (see 14 above) + 2x(dummy weight)

1954.8 kg = 1736.8 kg + 120.0 kg + 98.0 kg

X	20.2	Test Weight Range = Calculated Weight (- 4.5 kg, - 9 kg.)

Max. Test Weight = Calculated Test Weight – 4.5 kg = 1950.3 kg
Min. Test Weight = Calculated Test Weight – 9 kg = 1945.8 kg

X	21.	Remove the RCLW from the cargo area.
X	22.	Drain transmission fluid, engine coolant, motor oil, and windshield washer fluid from the test vehicle so that Stoddard solvent leakage from the fuel system will be evident.
X	23.	Vehicle Components Removed For Weight Reduction: Spare tire, tool and jack, rear seat cushion, and trunk interior
X	24.	Secure the equipment and ballast in the load carrying area and distribute it, as nearly as possible, to obtain the proportion of axle weight indicated by the gross axle weight ratings and center it over the longitudinal centerline of the vehicle.
X	25.	If necessary, add ballast to achieve the actual test weight.

	N/A
X	Weight of Ballast: 95.2 kg

X	26.	Ballast, including test equipment, must be contained so that it will not shift during the impact event or interfere with data collection or interfere with high-speed film recordings or affect the structural integrity of the vehicle or do anything else to affect test results. Care must be taken to assure that any attachment hardware added to the vehicle is not in the vicinity of the fuel tank or lines.
X	27.	Record the vehicle weight at each wheel to determine the actual test weight.

Right Front (kg):	480.8	Right Rear (kg):	494.4
Left Front (kg):	450.0	Left Rear (kg):	521.6
Total Front (kg):	930.8	Total Rear (kg):	1016.0
% Total Weight:	47.8	% Total Weight:	52.2
% GVW	45.6	% GVW	54.4
(% GVW = Axle GVW divided by Vehicle GVW)			
TOTAL FRONT PLUS TOTAL REAR (kg):			1946.8

X	28.	Is the test weight between the Max. Weight and the Min. Weight (See 20.2)?

X	Yes
	No, explain why not.

X	29.	Test Weight Vehicle Attitude: (all dimensions in millimeters)
X	29.1	Place the vehicle on a level surface
X	29.2	Measure perpendicular to the level surface to the 4 points marked on the body (see 13 above) and record the measurements

RF:	682	LF:	694	RR:	666	LR:	657

X	30.	Summary of test attitude
X	30.1	AS DELIVERED:

RF:	679	LF:	693	RR:	684	LR:	672

AS TESTED:

RF:	682	LF:	694	RR:	666	LR:	657

FULLY LOADED:

RF:	692	LF:	701	RR:	662	LR:	655

X	30.2	Is the “as tested” test attitude equal to or between the “fully loaded” and “as delivered” attitude?

X	Yes
	No, explain why not.

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 7/18/06

DATA SHEET 33

VEHICLE ACCELEROMETER LOCATION AND MEASUREMENT

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 7/18/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X 1. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the left front outboard seating position intersects the left rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.

X 2. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the right front outboard seating position intersects the right rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.

X 3. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect at the top of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.

X 4. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect the bottom of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart

X 5. Install an accelerometer on the right front brake caliper to record x-direction accelerations. Record the location on the following chart

X 6. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the top of the instrument panel. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart

X 7. Install an accelerometer on the left front brake caliper to record x-direction accelerations. Record the location on the following chart

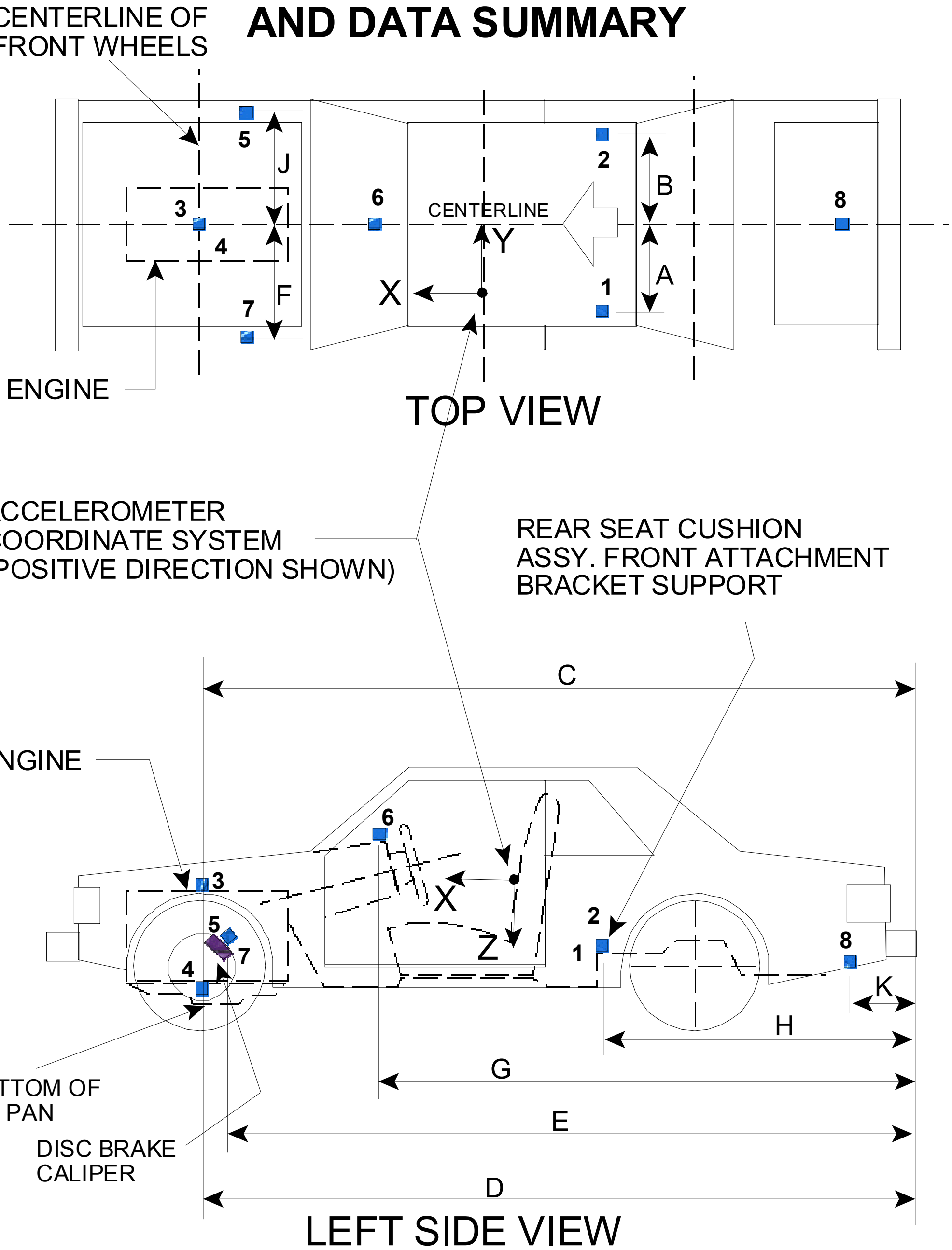
X 8. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the floor of the trunk. Install an accelerometer on the trunk floor at this intersection to record z-direction accelerations. Record the location on the following chart

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski   Date: 7/18/06

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



Dimensions Corresponding To The Letters “A” Through “K” (Excluding “I”) Are Recorded In The Table On The Following Page.

Accelerometers Corresponding To The Numbers 1 Through 8 Are Specified On The Preceding Page.

DATA SHEET 33

VEHICLE ACCELEROMETER LOCATION AND MEASUREMENTS

DIMENSION	LENGTH (mm)	
PRETEST VALUES		
A (LH Rear Seat Xmbr)	365	
B (RH Rear Seat Xmbr)	409	
C (Engine Top)	3964	
D (Engine Bottom)	3753	
E (Caliper)	Right Side 3802	Left Side 3802
F (Left Caliper)	698	
G (IP)	3132	
H (Seat)	1862	
J (Right Caliper)	663	
K (Trunk)	884	
POST TEST VALUES		
A (LH Rear Seat Xmbr)	365	
B (RH Rear Seat Xmbr)	409	
C (Engine Top)	3910	
D (Engine Bottom)	3694	
E (Caliper)	Right Side 3792	Left Side 3783
F (Left Caliper)	688	
G (IP)	3132	
H (Seat)	1862	
J (Right Caliper)	673	
K (Trunk)	884	

DATA SHEET 34

PHOTOGRAPHIC TARGETS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06
Test Technician:	Nick Kosinski		

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X	1.	FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B)
X	1.1	Targets A1 and A2 are on flat rectangular panels.
X	1.2	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the front on the outboard sides of A1 and A2. The center of each circular target is 100 mm from the one next to it.
X		Distance between targets (mm): 100 mm
X	1.3	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the back on the outboard sides of on A1 and A2. The center of each circular target is 100 mm from the one next to it.
X		Distance between targets (mm): 100 mm
X	1.4	The distance between the first circular target at the front of A1 and A2 and the last circular target at the back of A1 and A2 is at least 915 mm.
X		Distance between the first and last circular targets (mm): 915 mm
X	1.5	Firmly fix target A1 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy.
X	1.6	Firmly fix target A2 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy.
X	1.7	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the driver door. The centers of each circular target are at least 610 mm apart.
X		Distance between targets (mm): 610 mm
X	1.8	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the passenger door. The centers of each circular target are at least 610 mm apart.
X		Distance between targets (mm): 610 mm
X	1.9	Place tape with squares having alternating colors on the top portion of the steering wheel.
X	1.10	Chalk the bottom portion of the steering wheel
X	1.11	Is this an offset test?
		[ ] Yes, continue with this section
		[X] No, go to 2.
	1.12	Measure the width of the vehicle.
		Vehicle width (mm):

	1.13	Find the centerline of the vehicle. (½ of the vehicle width)
	1.14	Find the line parallel to the centerline of the vehicle and 0.1 x vehicle width from the centerline of the vehicle.
	1.15	Apply 25 mm wide tape with alternating black and yellow squares parallel to and on each side of the line found in 1.14. The edge of each tape shall be 50 mm from the line found in 1.14. The tape shall extend from the bottom of the bumper to the front edge of the windshield. (Figure 28D
X	2.	Barrier Targeting
X	2.1	Fix two stationary targets D1 and D2 to the barrier as shown in the Figure 28A. One target is in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy. The other is in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy
X	2.2	Targets D1 and D2 are on a rectangular panel.
X	2.3	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted on the sides of the rectangular panel away from the longitudinal centerline of the vehicle. The center of each circular target is 100 mm from the one next to it.
X		Distance between circular targets on D1 (mm): 100 mm
X		Distance between circular targets on D2 (mm): 100 mm
X	3.	FMVSS 208 Dummy Targeting Requirements
X	3.1	Place a circular target with black and yellow quadrants on both sides of the driver dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).
X	3.2	Place a circular target with black and yellow quadrants on both sides of the passenger dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).
X	3.3	Place a circular target with black and yellow quadrants on the outboard shoulder of the driver dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.
X	3.4	Place a circular target with black and yellow quadrants on the outboard shoulder of the passenger dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.
X	4.	FMVSS 204 Targeting Requirements
X	4.1	Is an FMVSS 204 indicant test ordered on the "COTR Vehicle Work Order?"
		[ ] Yes, continue with this form.
		[X] No, this form is complete.
	4.2	Resection panel (Figure 28C)
	4.2.1	The panel deviates no more than 6 mm from perfect flatness when suspended vertically
	4.2.2	The 8 targets on the panel are circular targets at least 90 mm in diameter and with black and yellow quadrants.
	4.2.3	The center of each of the 4 outer targets are placed within 1 mm of the corners of a square measuring 914 mm on each side.
	4.2.4	Locate another square with 228 mm sides and with the center of this square coincident with the center of the 914 mm square.
	4.2.5	The center of the 4 inner targets are placed at the midpoints of each of the 228 mm sides.

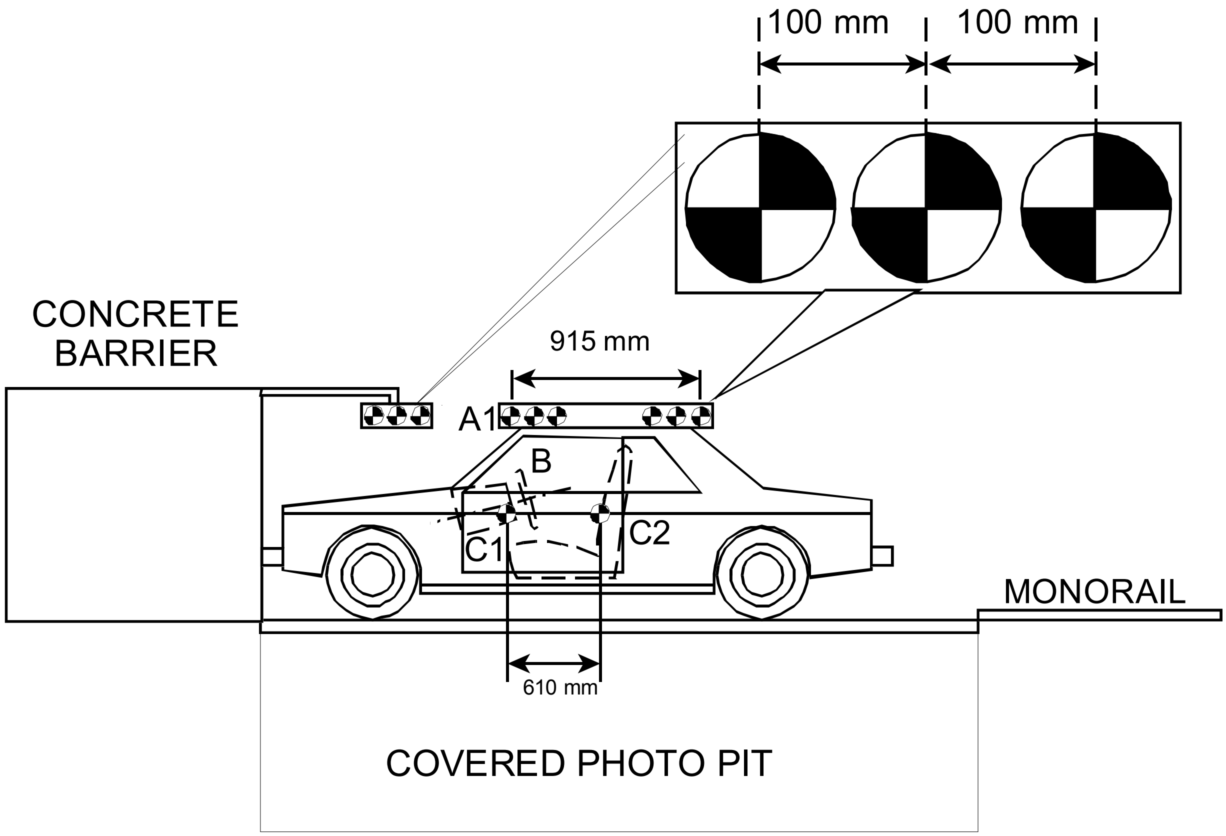
☐	4.3	Place a circular target at least 90 mm in diameter and with black and yellow quadrants on a material (cardboard, metal, etc.) that can be taped to the top of the steering column.
☐	4.4	Tape the target from 4.3 to the top of the steering column in a manner that does not interfere with the movement of the steering column in a crash

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

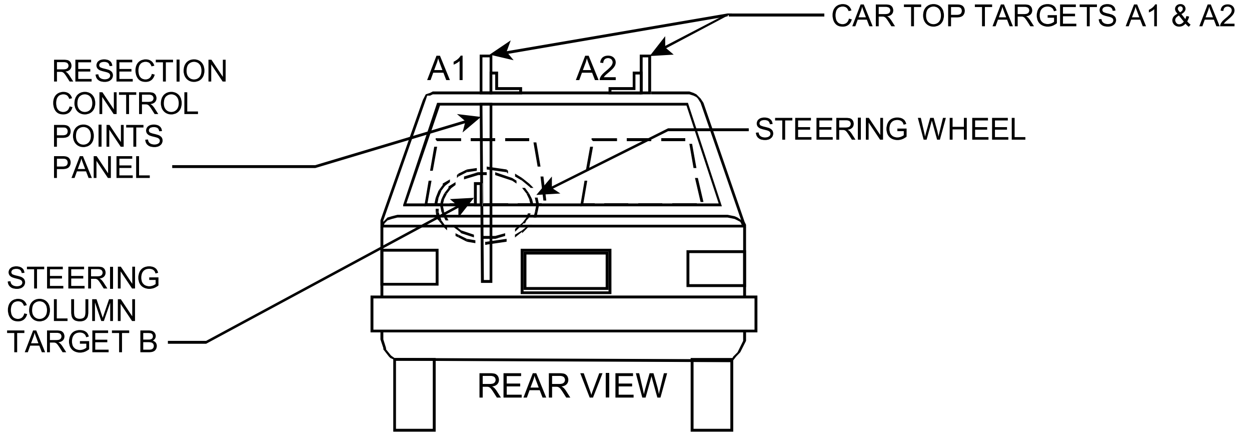
Date: 7/18/06

REFERENCE PHOTO TARGETS

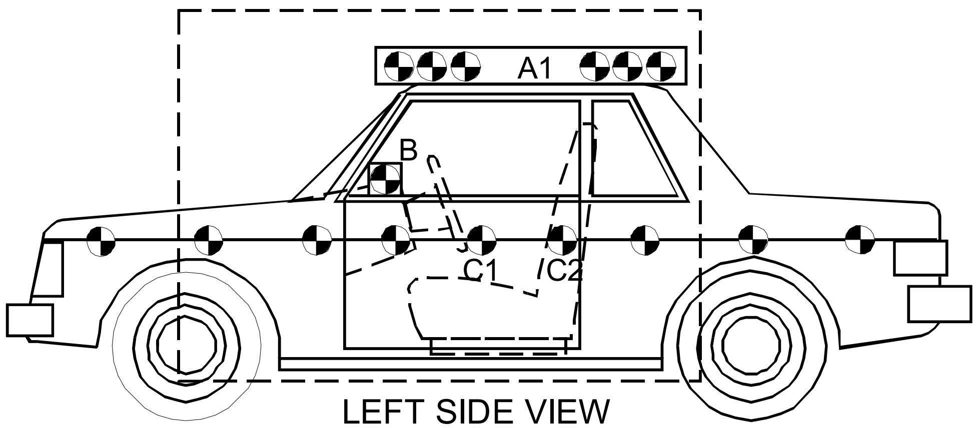


LEFT SIDE VIEW

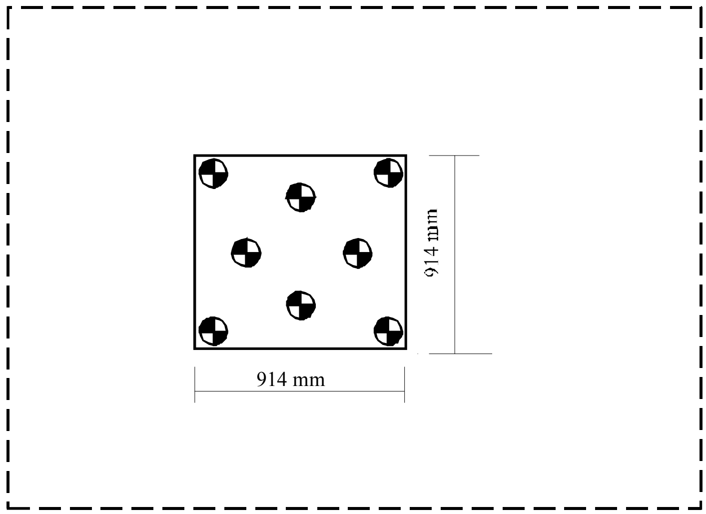
RESECTION PANEL TARGETING ALIGNMENT



TEST RUN STEERING COLUMN CAMERA VIEW OF TYPICAL TIME ZERO VEHICLE POSITION



PRE-RUN STEERING COLUMN HIGH SPEED CAMERA VIEW



LEFT SIDE VIEW

DATA SHEET 35

CAMERA LOCATIONS

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance

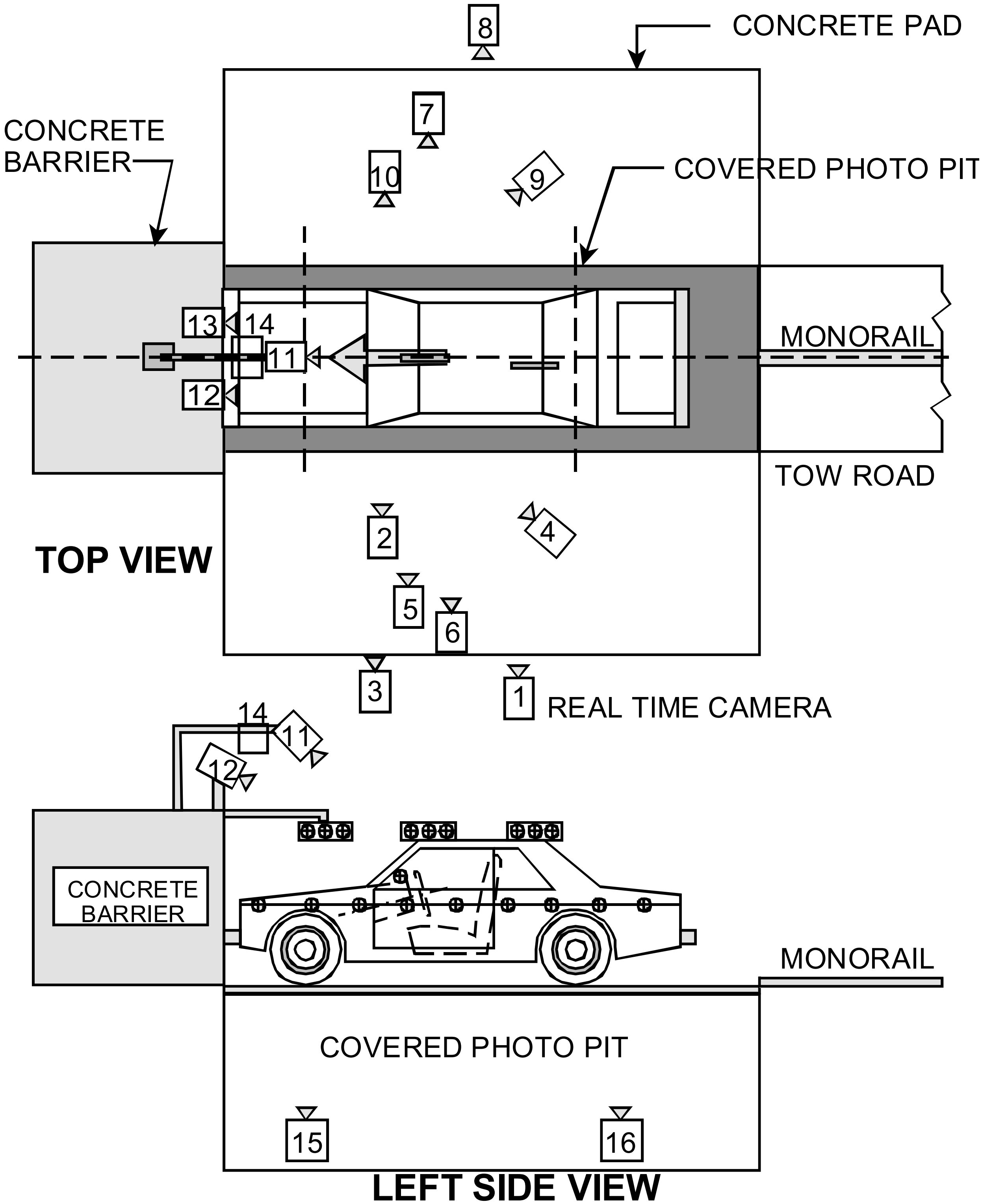
NHTSA No.: C60503
Test Date: 7/18/06
Time: 11:24 am

CAMERA NO.	VIEW	CAMERA POSITIONS (mm) *			LENS (mm)	SPEED (fps)
		X	Y	Z		
1	Real Time Left Side View				13	24
2	Left Side View (Barrier face to front seat backs)	1230	-4890	1235	24	1000
3	Left Side View (Driver)	1690	-6385	1260	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	6205	-5575	2085	50	1000
5	Left Side View (Steering Column)	1395	-5105	1445	25	1000
6	Left Side View (Steering Column)	1420	-5095	990	25	1000
7	Right Side View (Overall)	1845	6420	1280	19	1000
8	Right Side View (Passenger)	1460	6665	1400	35	1000
9	Right Side View (Angle)	6130	5335	2085	50	1000
10	Right Side View (Front door)	1120	5050	1320	24	1000
11	Front View Windshield	-285	0	2370	12.5	1000
12	Front View Driver	-140	-375	2205	24	1000
13	Front View Passenger	-150	515	2210	24	1000
14	Overhead Barrier Impact View	1320	0	5050	19	1000
15	Pit Camera Engine View	1365	0	-3150	24	1000
16	Pit Camera Fuel Tank View	3425	0	-3150	24	1000

*COORDINATES:

+X - forward of impact plane
+Y - right of monorail centerline
+Z - above ground level

CAMERA POSITIONS FOR FMVSS 208



DATA SHEET 36

APPENDIX G
DUMMY POSITIONING PROCEDURES
FOR 5th% DRIVER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle: 2006 Mercedes E350 NHTSA No.: C60503
Test Program: FMVSS 208 Compliance Test Date: 7/18/06
Test Technician: Joe Fleck

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th Female		__ 50th Male
PASSENGER DUMMY:	_X_ 5th Female		__ 50th Male

_X_ 1. Using the markings made from data sheet 14.3 (If not done previously or steering repairs have been made, complete data sheet 14.3 at this time.) to position the steering controls in the mid-position or if applicable next lowest detent position. (S16.2.9)

_X_ 2. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.2.1.1)

_X_ 3. If the vehicle has an adjustable accelerator pedal, place it in the full forward position. (S16.3.2.2.1)
_X_ N/A accelerator pedal not adjustable

_X_ 4. Fully recline the seat back. (S16.3.2.1.2)
__ N/A seat back not adjustable.

_X_ 5. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.2.1.2)

_X_ 6. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion markings as determined in Data Sheet 14.1. (S16.3.2.1.3 and S16.3.2.1.4)

_X_ 7. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.2.1.5)

_X_ 8. Set the angle between the legs and the thighs to 120 degrees. (S16.3.2.1.6)

_X_ 9. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches) Center the knee separation with respect to the longitudinal seat cushion marking as determined Data Sheet 14.1. (S16.3.2.1.6)
Record Knee Separation ___160___

_X_ 10. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.2.1.6)
__Pelvis contacted seat back.
_X_ Calves contacted seat cushion.

X 11. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three time. (S16.3.2.1.7)

X 12. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.2.1.8)

X 13. Position the right foot until the foot is in line with a longitudinal vertical plane passing through the center of the accelerator pedal. Maintain the leg and thigh in a vertical plane. (S16.3.2.1.8)

X 14. Rotate the left leg and thigh laterally to equalize the distance between each knee and the longitudinal seat cushion marking as determined in Data Sheet 14.1. (S16.3.2.1.8)

X 15. Attempt to return the seat to the foremost fore-aft position, mid-height, and seat cushion mid-angle as determined in Data Sheet 14.2. The foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg. (S16.3.2.1.8)
X Foremost position achieved. Proceed to step 20.
__Foremost not achieved because of foot interference. Proceed to step 17.
__Foremost not achieved because of steering wheel contact.

__16. If either of the dummy's legs contact the steering wheel, move the steering wheel up the minimum amount required to avoid contact. If the steering wheel is not adjustable separate the knees the minimum required to avoid contact. (S16.3.2.1.8)
__N/A- there was no leg contact
__Steering wheel repositioned
__Knees separated

__17. If the left foot interferes with the clutch or brake pedals, rotate the left foot about the leg to provide clearance. If this is not sufficient, rotate the thigh outboard at the hip the minimum amount required for clearance. (S16.3.2.1.8)
__N/A, No foot interference with pedals.
__Foot adjusted to provide clearance.
__Foot and Thigh adjusted to provide clearance.

__18. Continue to move the seat. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8)
__Foremost, mid-height position and the seat cushion mid-angle reached
__Dummy contact. Clearance set at maximum of 5mm
Measured Clearance______________
__Dummy Contact. Seat set at nearest detent position.
Seat position ___ detent positions rearward of foremost
(foremost is position zero)

__19. If the steering wheel was repositioned in step 16, return the steering wheel to the original position. If the steering wheel contacts the dummy before reaching the original position, position the wheel until a maximum clearance of 5mm (.2 inches) is achieved, or the steering wheel is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8)

__N/A Steering wheel was not repositioned.

__Original position achieved.

__Dummy contact. Clearance set at maximum of 5mm

Measured Clearance______________

__Dummy Contact. Steering wheel set at nearest detent position.

Steering wheel position ___ detent positions upward of original position.

(Original position is position zero)

X 20. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.2.1.9)

X Head Level Achieved. (Check all that apply)

X Head leveled using the adjustable seat back

__Head leveled using the neck bracket.

Head Angle ____0.3____ degrees

__Head Level NOT Achieved. (Check all that apply)

__Head adjusted using the adjustable seat back

__Head adjusted using the neck bracket.

Head Angle ____________ degrees

X 21. Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)

X No interference

__Pelvis moved forward the minimum amount so that it is not caught in the seat bight.

X 22. Verify the dummy abdomen is properly installed. (S16.3.2.1.9)

X Abdomen still seated properly into dummy

__Abdomen was adjusted because it was not seated properly into dummy

X 23. Head Angle

X N/A, neither the pelvis nor the abdomen were adjusted.

X 23.1 Head still level (Go to 24)

__23.2 Head level adjusted

__Head Level Achieved. (Check all that apply)

__Head leveled using the adjustable seat back

__Head leveled using the neck bracket.

Head Angle ____________ degrees

__Head Level NOT Achieved. (Check all that apply)

__Head level adjusted using the adjustable seat back

__Head level adjusted using the neck bracket.

Head Angle ____________ degrees

X 24. If the dummy torso contacts the steering wheel while performing step 20, reposition the steering wheel in the following order to eliminate contact. (S16.3.2.1.9)
X N/A, No dummy torso contact with the steering wheel.

__24.1 Adjust telescoping mechanism.
__N/A No telescoping adjustment.
__Adjustment performed (fill in appropriate change)
Steering wheel moved ____ detent positions in the forward direction.
Steering wheel moved ____ mm in the forward direction.

__24.2 Adjust tilt mechanism.
__N/A No tilt adjustment.
__No adjustment performed.
__Adjustment performed.
Steering wheel moved ____ detent positions Upward/Downward. (circle one)
Steering wheel moved ____ degrees Upward/Downward

__24.3 Adjust Seat in the aft direction.
__No Adjustment performed.
__Seat moved aft ___ mm from original position.
__Seat moved aft ___ detent positions from the original position.

X 25. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level. (S16.3.2.1.11)
X Pelvic angle set to 20.0 degrees ± 2.5 degrees.
__Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
__Record the pelvic angle. ____22.3___ degrees

X 26. Check the dummy for contact with the interior after completing adjustments. (S16.3.2.1.12)
X No contact.
__Dummy in contact with interior.
__Seat moved aft ___ mm from the previous position.
__Seat moved aft ___ detent positions from the previous position.

X 27. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.2.1.12)
X N/A, Seat already at foremost position.
__Clearance unchanged. No adjustments required.
__Additional clearance available
__Seat moved Forward ___ mm from the previous position.
__Seat moved Forward ___ detent positions from the previous position.

X 28. Driver's foot positioning, right foot. Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 29 otherwise, proceed to step 30. (S16.3.2.2.1)

_X_29. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 29.6 shall be completed in all cases. (S16.3.2.2.1(a))

_X_29.1 With the rear of the heel contacting the floor pan, move the foot forward until pedal contact occurs or the foot is at the full forward position.

__29.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position.

__29.3 Extend the leg, allowing the heel to lose contact with the floor until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

__29.4 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

__29.5 Align the centerline of the foot with the vertical-longitudinal plane passing through the center of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

_X_29.6 Record foot position

X Pedal Contact achieved. Contact occurred at step __29.1___.

X Heel contacts floor pan

__Heel set _____ mm from floor pan.

__ Pedal Contact not achieved. Heel set _____ mm from the floor pan.

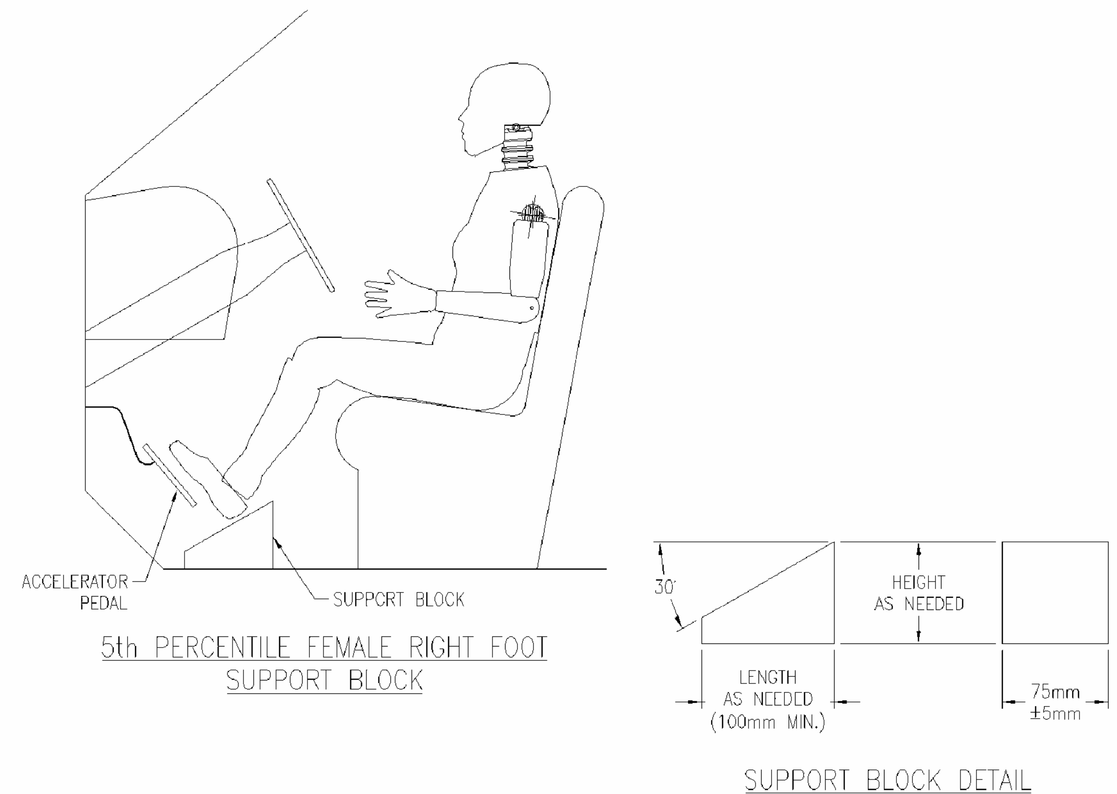


FIGURE G1

__30. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 30.5 shall be completed in all cases.

__30.1 Extend the leg until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3)

__30.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3)

__N/A No pedal adjustment

__30.3 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.2 & S16.3.2.2.3)

__30.4 Align the centerline of the foot in the same horizontal plane as the centerline of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

__30.5 Record foot position

__Pedal Contact achieved. Contact occurred at step ________.

__ Heel set _____ mm from floor pan.

__Pedal Contact not achieved. Heel set _____ mm from the floor pan.

X 31. Driver's foot positioning, left foot.

X 31.1 Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 31.2, otherwise position the leg as perpendicular to the thigh as possible with the foot parallel to the floor pan. (S16.2.2.6)

X 31.2 Place the foot on the toe board with the heel resting on the floor pan as close to the intersection of the floor pan and the toe board as possible. Adjust the angle of the foot if necessary to contact the toe board. If the foot will not contact the toe board, set the foot perpendicular to the leg, and set the heel on the floor pan as far forward as possible. Avoid contact with the brake pedal, clutch pedal, wheel well projection, and footrest. To avoid this contact use the following three manipulations in the order listed, with each subsequent option incorporating the previous, until contact is avoided: rotate the foot about the lower leg (abduction/adduction), plantar flex the foot, rotate the leg outboard about the hip . Movement should be the minimum amount necessary. If it is not possible to avoid all foot contact, give priority to avoiding brake or clutch pedal contact. (S16.2.2.4 & S16.2.2.5 & S16.2.2.7)

X No contact

__Foot rotated about the leg (abduction/adduction)

__Foot rotated about the leg, and foot plantar flexed

__Foot rotated about the leg, foot plantar flexed, and the leg rotated about the hip.

X 31.3 Record foot position.

__Heel does not contact floor pan.

__Heel on floor pan and foot on toe board.

X Heel on floor pan and foot not on toe board.

X 32. Driver arm/hand positioning.

X 32.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)

X 32.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim. (S16.3.2.3.2)

X 32.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible. (S16.3.2.3.3)

X 32.4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim. S16.3.2.3.4

X 33. Adjustable head restraints

__N/A, there is no head restraint adjustment

__33.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 34.

__33.2 Adjust each head restraint vertically so that the mid-horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)

X 33.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)
__N/A midpoint position attained in previous step
X Headrest set at nearest detent below the head CG

__33.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)

__34. Driver and passenger manual belt adjustment (for tests conducted with a belted dummy). (S16.3.5) UNBELTED TEST

__34.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. (S16.3.5.1) **This information will be supplied by the COTR.**
Manufacturer's specified position ____
Actual Position____

__34.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)

__34.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

__34.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

I certify that I have read and performed each instruction.

Signature: Joe Fleck __________________________ Date: 7/18/06

APPENDIX G

DUMMY POSITIONING PROCEDURES

FOR 5th% PASSENGER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Eric Peschman

NHTSA No.: C60503
Test Date: 7/18/06

IMPACT ANGLE:	Zero Degrees			
BELTED DUMMIES (YES/NO):	No			
TEST SPEED:	_X_ 32 to 40 kmph		__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th Female		__ 50th Male	
PASSENGER DUMMY:	_X_ 5th Female		__ 50th Male	

(Check this item ONLY if it applies to this vehicle.)

__The passenger seat adjustments are controlled by the adjustments made to the driver's seat. Therefore, positioning of the passenger dummy is made simultaneously with the driver dummy. Adjustments made to the seat to position the driver will over ride any adjustments that would normally be made to position the passenger. (S16.2.10.3)

X 1. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.3.1.1)

X 2. Fully recline the seat back. (S16.3.3.1.2)
__ N/A seat back not adjustable.

X 3. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)

X 4. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion marking that was determined in Data Sheet 14.1. (S16.3.3.1.3 and S16.3.3.1.4)

X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)

X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)

X 7. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches). Center the knee separation with respect to the longitudinal seat cushion marking that was determined Data Sheet 14.1. (S16.3.3.1.6)
Record Knee Separation ____165___

X 8. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
X Pelvis contacted seat back.
__Calves contacted seat cushion.

X 9. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.3.1.7)

_X_ 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)

_X_ 11. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.3.1.8)

X Foremost, mid-height position and the seat cushion mid-angle reached

__Dummy contact. Clearance set at maximum of 5mm

Measured Clearance______________

__Dummy Contact. Seat set at nearest detent position.

Seat position ___ detent positions rearward of foremost (foremost is position zero)

_X_ 12. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, adjust the head as closely as possible to the ± 0.5 degree range. (S16.3.3.1.9 and S16.3.3.1.10)

(Check All That Apply)

__Seat back not adjustable

__Seat back not independent of driver side seat back

X Head Level Achieved. (Check all that apply)

X Head leveled using the adjustable seat back

__Head leveled using the neck bracket.

Head Angle ____0.2____ degrees

__Head Level NOT Achieved. (Check all that apply)

__ Head adjusted using the adjustable seat back

__ Head adjusted using the neck bracket.

Head Angle ____________ degrees

_X_ 13. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)

X No interference

__Pelvis moved forward the minimum amount so that it is not caught in the seat bight.

_X_ 14. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)

X Abdomen still seated properly into dummy

__Abdomen was adjusted because it was not seated properly into dummy

_X_ 15. Head Angle

X N/A, neither the pelvis nor the abdomen were adjusted.

_X_ 15.1 Head still level (Go to 16)

__15.2 Head level adjusted

__Head Level Achieved. (Check all that apply)

__Head leveled using the adjustable seat back

__Head leveled using the neck bracket.

Head Angle ____________ degrees

__Head Level NOT Achieved. (Check all that apply)

__Head adjusted using the adjustable seat back

__Head adjusted using the neck bracket.

Head Angle ____________ degrees

X 16. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level.

X Pelvic angle set to 20.0 degrees ± 2.5 degrees.

__Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.

X Record the pelvic angle. ____18.7____ degrees

X 17. Check the dummy for contact with the interior after completing adjustments.

X No contact.

__Dummy in contact with interior.

__Seat moved aft ___ mm from the previous position.

__Seat moved aft ___ detent positions from the previous position.

X 18. Verify the transverse instrument platform of the dummy head is level +/- 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11)

X Head Level Achieved

Head Angle ____0.2_____ degrees

__Head Level NOT Achieved.

Head Angle ____________ degrees

X 19. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.3.1.12)

__N/A Bench Seat

X N/A Seat already at full forward position.

__Clearance unchanged. No adjustments required.

__Additional clearance available

__Seat moved Forward ___ mm from the previous position.

__Seat moved Forward ___ detent positions from the previous position.

__Seat moved Forward, Full Forward position reached.

X 20. Passenger foot positioning. (Indicate final position achieved) (S16.3.3.2)

__20.1 Place feet flat on the toe board; OR (S16.3.3.2.1)

X 20.2 If the feet cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible; OR (S16.3.3.2.2)

__20.3 If the heels do not touch the floor pan, set the legs as perpendicular to the thighs as possible and set the feet parallel to the floor pan. (S16.3.3.2.2)

X 21. Passenger arm/hand positioning. (S16.3.3.3)

X 21.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.3.3.1)

X 21.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)

X 21.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)

X 22. Adjustable head restraints (S16.3.4)
__N/A, there is no head restraint adjustment

__22.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 23.

__22.2 Adjust each head restraint vertically so that the horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)

X 22.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)
__N/A midpoint position attained in previous step
X Headrest set at nearest detent below the head CG

X 22.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)

X 23. Manual belt adjustment (for tests conducted with a belted dummy) S16.3.5
X N/A, Unbelted test

__23.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. **This information will be supplied by the COTR.** (S16.3.5.1
Manufacturer's specified position ____
Actual Position____

__23.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)

__23.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

__23.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

I certify that I have read and performed each instruction.

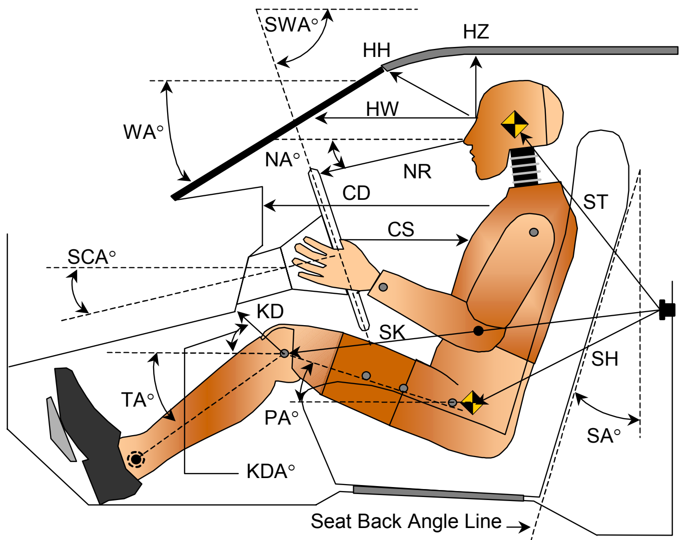
Signature: Eric Ferdman Date: 7/18/06

DATA SHEET 37

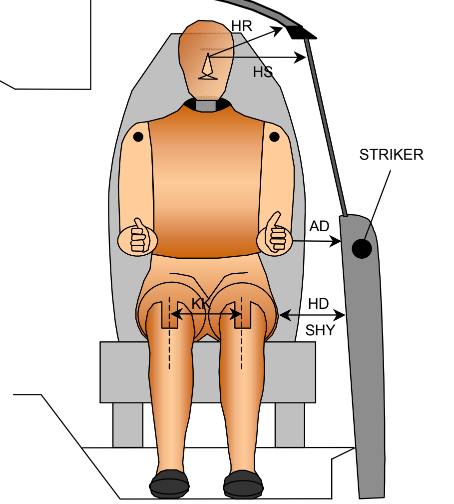
DUMMY MEASUREMENTS

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06
Test Technician:	Eric Peschman		

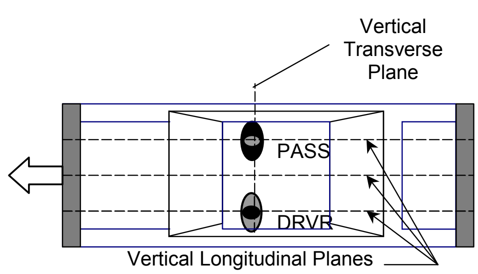
DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



AD	Arm to Door
HD	H-Point to Door
HR	Head to Side Header
HS	Head to Side Window
KK	Knee to Knee
SHY	Striker to H-Point (Y Axis)



CD	Chest to Dash
CS	Chest to Steering Wheel Hub
HH	Head to Header
HW	Head to Windshield
HZ	Head to Roof
KDA	Knee to Dash Angle
KDL	Left Knee to Dash
KDR	Right Knee to Dash
NA	Nose to Rim Angle
NR	Nose to Rim
PA	Pelvic Angle
RA	Rim to Abdomen
SA	Seat Back Angle
SCA	Steering Column Angle
SH	Striker to H-Point
SK	Striker to Knee
ST	Striker to Head
SWA	Steering Wheel Angle
TA	Tibial Angle
WA	Windshield Angle



DATA SHEET 37

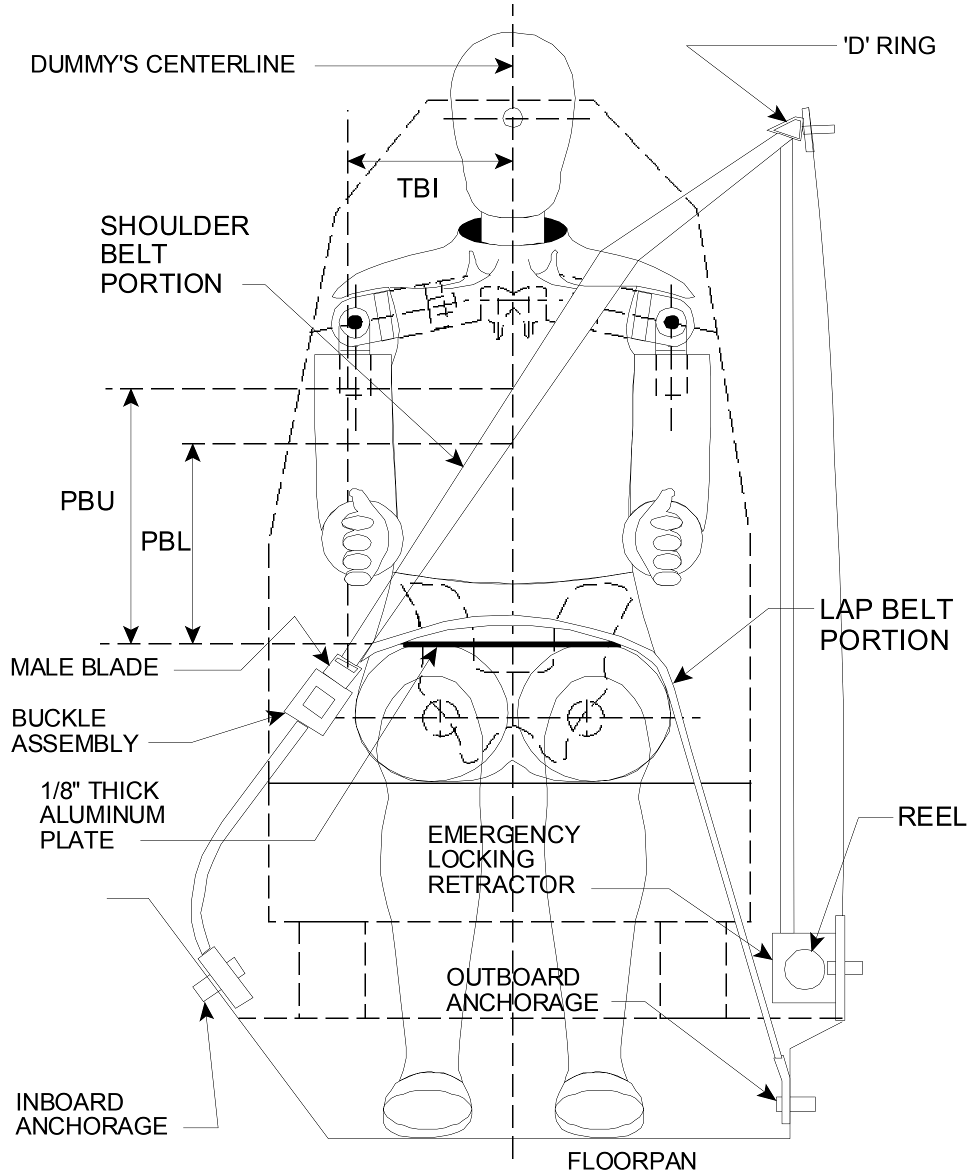
DUMMY MEASUREMENTS

Test Vehicle: 2006 Mercedes E350 NHTSA No.: C60503
Test Program: FMVSS 208 Compliance Test Date: 7/18/06
Test Technician: Eric Peschman

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver SN 505		Passenger SN 510	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		30.2		
SWA	Steering Wheel Angle		68.7		
SCA	Steering Column Angle		21.6		
SA	Seat Back Angle (On Headrest)		1.0		2.9
HZ	Head to Roof (Z)	182		165	
HH	Head to Header	274	52.6	255	49.1
HW	Head to Windshield	546	0.0	518	0.0
HR	Head to Side Header (Y)	254		227	
NR	Nose to Rim	277	0.4		
CD	Chest to Dash	414		440	
CS	Chest to Steering Hub	207	4.4		
RA	Rim to Abdomen	93	0.0		
KDL	Left Knee to Dash	109	37.1	112	
KDR	Right Knee to Dash	84		118	40.7
PA	Pelvic Angle		22.3		18.7
TA	Tibia Angle		46.5		49.4
KK	Knee to Knee (Y)	214		225	
SK	Striker to Knee	694	103.7	664	100.7
ST	Striker to Head	416	24.5	425	26.1
SH	Striker to H-Point	399	115.3	372	118.4
SHY	Striker to H-Point (Y)	282		282	
HS	Head to Side Window	359		352	
HD	H-Point to Door (Y)	216		224	
AD	Arm to Door (Y)	154		165	
AA	Ankle to Ankle	272		185	

SEAT BELT POSITIONING DATA



FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
PBU - Top surface of reference to belt upper edge	mm	N/A	N/A
PBL - Top surface of reference to belt lower edge	mm	N/A	N/A

DATA SHEET 38

CRASH TEST

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06
Test Technician:	Eric Peschman		

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5^{th} female	__ 50^{th} male	
PASSENGER DUMMY:	_X_ 5^{th} female	__ 50^{th} male	

X	1.	Vehicle underbody painted
X	2.	The speed measuring devices are in place and functioning.
X	3.	The speed measuring devices are 1.0 m from the barrier (spec. 1.5m) and 30 cm from the barrier (spec. is 30 cm)
X	4.	Convertible top is in the closed position. [X] N/A, not a convertible
X	5.	Instrumentation and wires are placed so the motion of the dummies during impact is not affected.
X	6.	Tires inflated to pressure on tire placard or if it does not have a tire placard because it is not a passenger car, then inflated to the tire pressure specified in the owner information.

196 kpa front left tire — 196 kpa specified on tire placard or in owner information
196 kpa front right tire — 196 kpa specified on tire placard or in owner information
210 kpa rear left tire — 210 kpa specified on tire placard or in owner information
210 kpa rear right tire — 210 kpa specified on tire placard or in owner information

X	7.	Time zero contacts on barrier in place.
X	8.	Pre test zero and shunt calibration adjustments performed and recorded
X	9.	Dummy temperature meets requirements of section 12.2 of the test procedure.
X	10.	Vehicle hood closed and latched
X	11.	Transmission placed in neutral
X	12.	Parking brake off
X	13.	Ignition in the ON position
X	14.	Doors closed and latched but not locked
X	15.	Posttest zero and shunt calibration checks performed and recorded
X	16.	Actual test speed 39.8 kmph
X	17.	Vehicle rebound from the barrier 132 cm
X	18.	Describe whether the doors open after the test and what method is used to open the doors.

[X] Left Front Door: Door remained closed and latched; Door opened without tools
[X] Right Front Door: Door remained closed and latched; Door opened without tools
[X] Left Rear Door: Door remained closed and latched; Door opened without tools
[X] Right Rear Door: Door remained closed and latched; Door opened without tools

X	19.	Describe the contact points of the dummy with the interior of the vehicle.

X	Driver Dummy: Head to Air Bag and Headrest; Chest to Air Bag; Knees to Knee Bolster and Steering Column
X	Passenger Dummy: Head to Visor, Air Bag, and Headrest; Chest to Air Bag; Knees to Glove Box and Dash

REMARKS:

I certify that I have read and performed each instruction.

Signature:________________________ Date: 7/18/06

DATA SHEET NO. 40

ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06
Test Technician:	Nick Kosinski		

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female		__ 50th male
PASSENGER DUMMY:	_X_ 5th female		__ 50th male

Vehicle Year/Make/Model/Body Style:	2006 Mercedes E350 Passenger Car
VIN:	WDBUF56J76A841487
Wheelbase:	2854 mm
Build Date:	06/05
Vehicle Size Category:	4
Test Weight:	1946.8 kg
Front Overhang:	800 mm
Overall Width:	1800 mm
Overall Length Center:	4803 mm

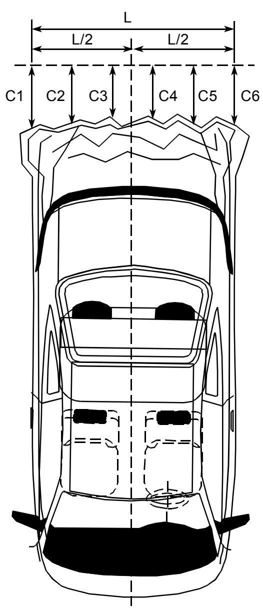
Accelerometer Data	
Location:	As per measurements on Data Sheet 33
Linearity:	>99.9%

Integration Algorithm:	Trapezoidal
Vehicle Impact Speed:	39.8 kmph
Time of Separation:	133.2 ms
Velocity Change:	46.2 kmph

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6
Midpoint of Damage: Vehicle Longitudinal Centerline
Damage Region Length (mm): 1265
Impact Mode: Frontal Barrier

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	4726	4440	286
C2	Crush zone 2 at left side	mm	4750	4431	319
C3	Crush zone 3 at left side	mm	4787	4426	361
C4	Crush zone 4 at right side	mm	4786	4446	340
C5	Crush zone 5 at right side	mm	4753	4461	292
C6	Crush zone 6 at right side	mm	4724	4465	259



REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 7/18/06

DATA SHEET 41

WINDSHIELD MOUNTING (FMVSS 212)

Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 7/18/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female		__ 50th male
PASSENGER DUMMY:	_X_ 5th female		__ 50th male

1. Pre-Crash

[X] 1.1 Describe from visual inspection how the windshield is mounted and describe any trim material.

Retained with glue
Rubber trim

[X] 1.2 Mark the longitudinal centerline of the windshield

[X] 1.3 Measure pre-crash A, B, and C for the left side and record in the chart below.

[X] 1.4 Measure pre-crash C, D, and E for the right side and record in the chart below.

[X] 1.5 Measure from the edge of the retainer or molding to the edge of the windshield.

[X] Dimension G (mm): 7 mm

2. Post Crash

[X] 2.1 Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body?

- [X] No – Pass. Skip to the table of measurements, complete it by repeating the pre-crash measurements in the post crash column, and calculate the retention percentage, which will be 100%.
- [ ] Yes, go to 2.2

[ ] 2.2 Visibly mark the beginning and end of the portions of the periphery where the paper slides between the windshield and the vehicle body.

[ ] 2.3 Measure and record post-crash A, B, C, D, E, and F such that the measurements do not include any of the parts of the windshield where the paper slides between the windshield and the vehicle body.

[ ] 2.4 Calculate and record the percent retention for the right and left side of the windshield.

[ ] 2.5 Is total right side percent retention less than 75%?

- [ ] Yes, Fail
- [ ] No, Pass

[ ] 2.6 Is total left side percent retention less than 75%?

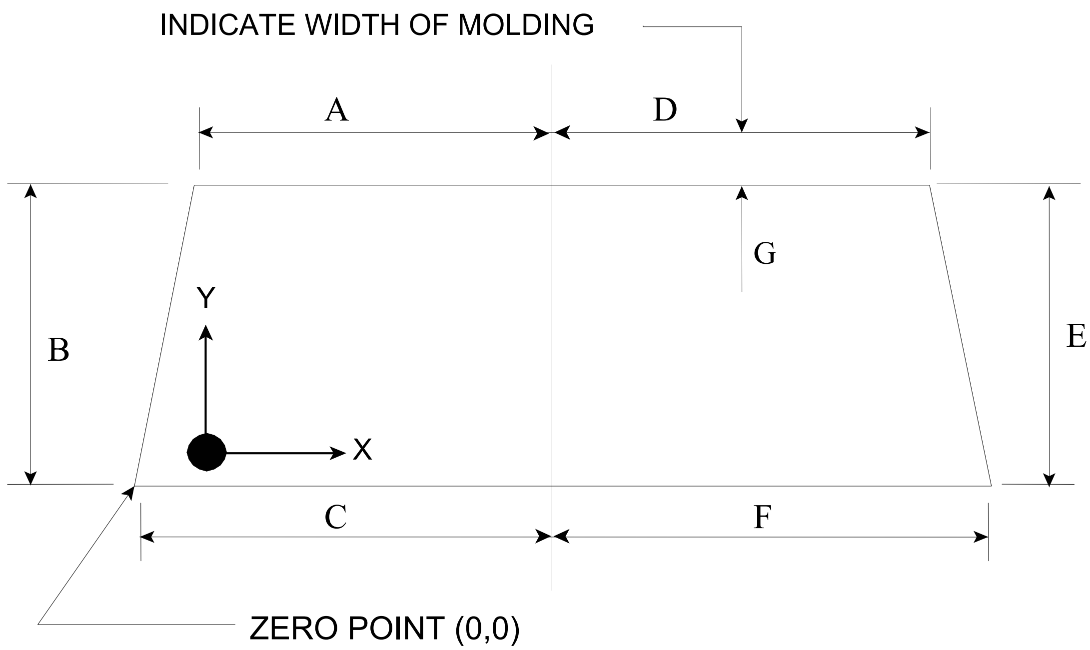
- [ ] Yes, Fail
- [ ] No, Pass

WINDSHIELD RETENTION MEASUREMENTS

	Dimension	Pre-Crash (mm)	Post-Crash (mm)	Percent Retention (Post-Test ÷ Pre-Crash)
Left Side	A	588	588	100%
	B	760	760	100%
	C	783	783	100%
	Total	2131	2131	100%
Right Side	D	588	588	100%
	E	760	760	100%
	F	783	783	100%
	Total	2131	2131	100%

Indicate area of mounting failure. NONE

FRONT VIEW OF WINDSHIELD



REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 7/18/06

DATA SHEET 42

WINDSHIELD ZONE INTRUSION (FMVSS 219)

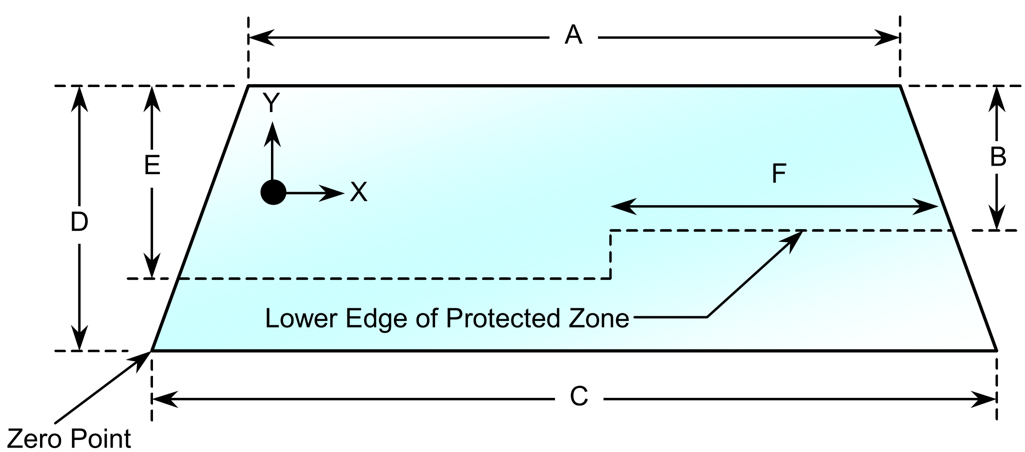
Test Vehicle: 2006 Mercedes E350
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60503
Test Date: 7/18/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X	1.	Place a 165 mm diameter rigid sphere, with a mass of 6.8 kg on the instrument panel so that it is simultaneously touching the instrument panel and the windshield. (571.219 S6.1(a))
X	2.	Roll the sphere from one side of the windshield to the other while marking on the windshield where the sphere contacts the windshield. (571.219 S6.1(b))
X	3.	From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))
X	4.	Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3
X	5.	After the crash test, record any points where a part of the exterior of the vehicle has marked, penetrated, or broken the windshield.

Provide all dimensions necessary to reproduce the protected area.



FRONT VIEW OF WINDSHIELD

WINDSHIELD DIMENSIONS

Item	Units	Value
A	mm	1176
B	mm	510
C	mm	1566
D	mm	760
E	mm	504
F	mm	523

AREA OF PROTECTED ZONE FAILURES:

B. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one which is normally in contact with the windshield.

X	Y
NONE	

C. Provide coordinates of the area beneath the protected zone template that the inner surface of the windshield was penetrated by a vehicle component.

X	Y
NONE	

REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski Date: 7/18/06

DATA SHEET 43

FUEL SYSTEM INTEGRITY (FMVSS 301)

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06
Test Technician:	Eric Peschman		

TYPE OF IMPACT:	25 mph Unbelted Flat Frontal

Stoddard Solvent Spillage Measurements

A. From impact until vehicle motion ceases: 0.0 grams
(Maximum Allowable = 28 grams)

B. For the 5 minute period after motion ceases: 0.0 grams
(Maximum Allowable = 142 grams)

C. For the following 25 minutes: 0.0 grams
(Maximum Allowable = 28 grams/minute)

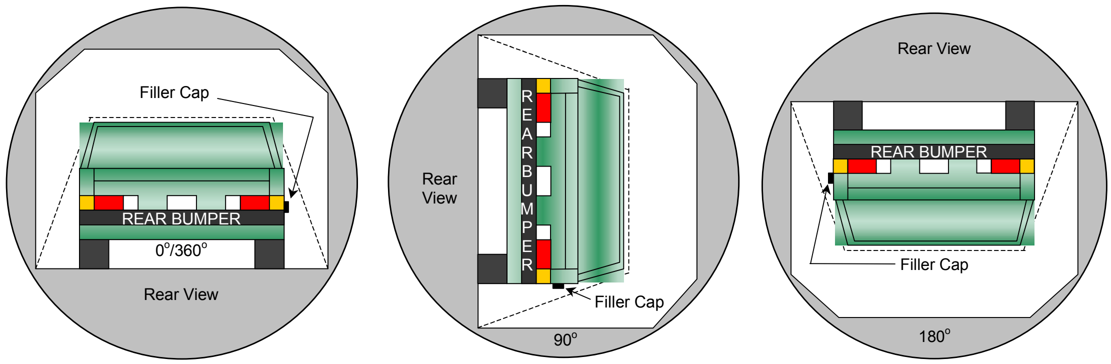
D. Spillage: NONE

REMARKS: NO SPILLAGE

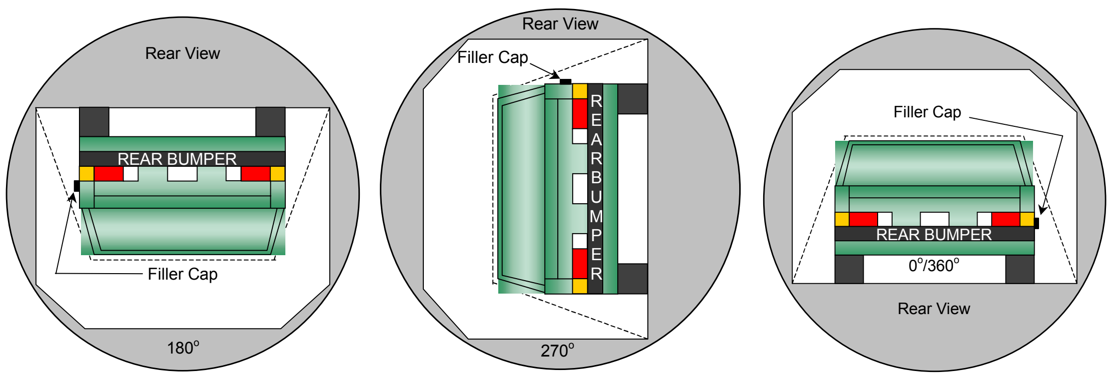
DATA SHEET NO. 43

FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle:	2006 Mercedes E350	NHTSA No.:	C60503
Test Program:	FMVSS 208 Compliance	Test Date:	7/18/06



0° to 90° 90° to 180°



180° to 270° 270° to 360°

1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent spillage locations: **None**

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (grams)
0° to 90°	120	305	0.0
90° to 180°	116	305	0.0
180° to 270°	110	305	0.0
270° to 360°	115	305	0.0

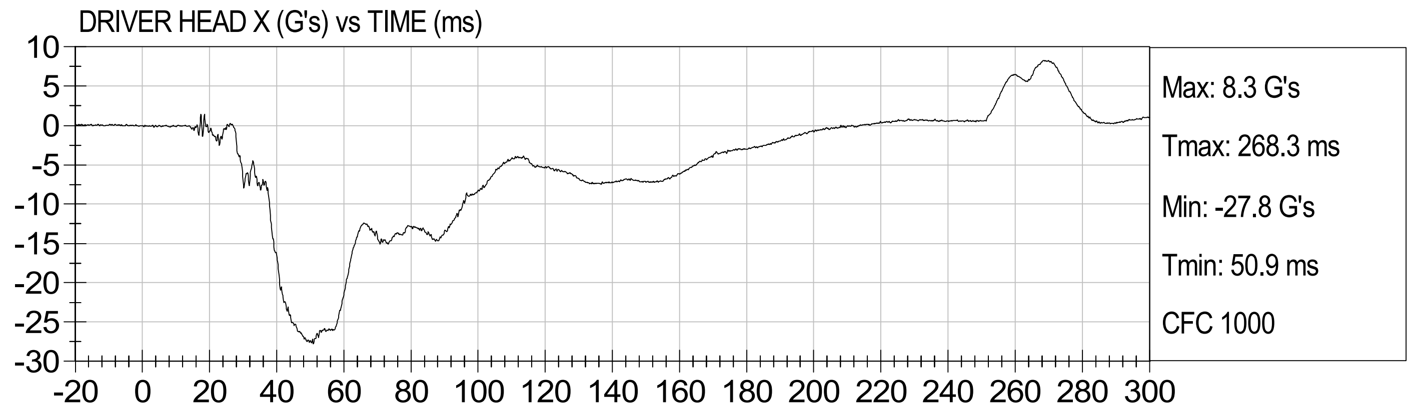
APPENDIX A

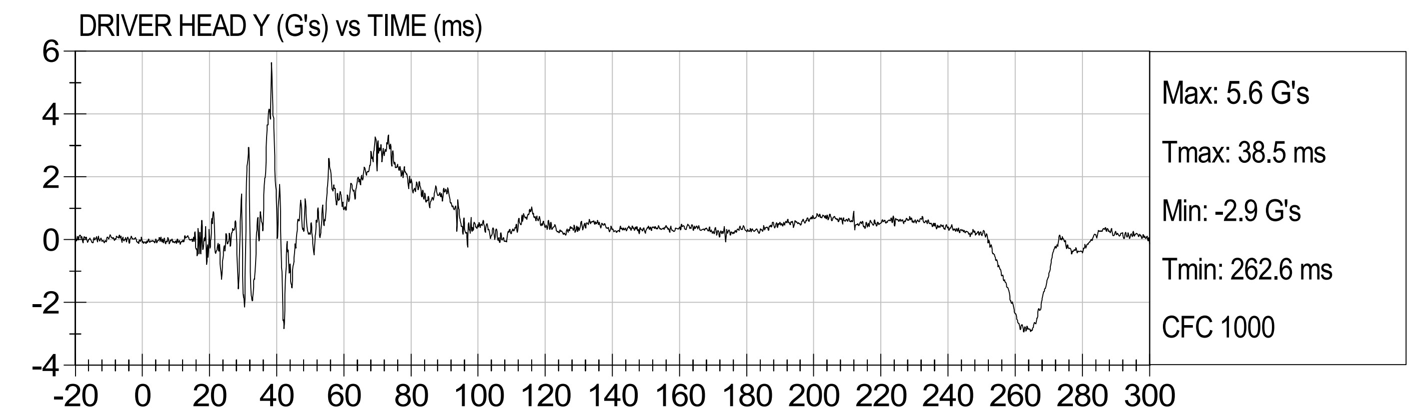
CRASH TEST DATA

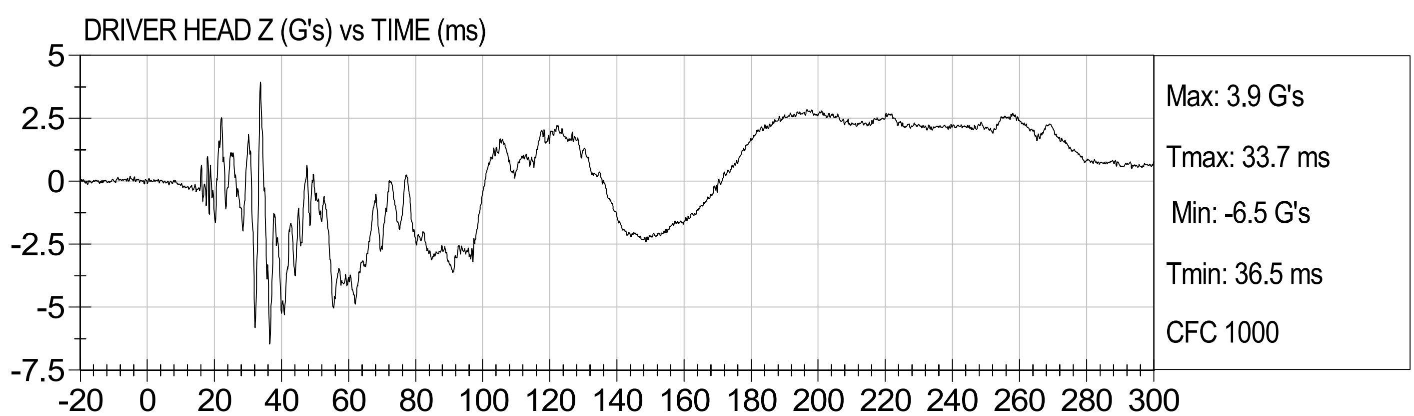
TABLE OF DATA PLOTS

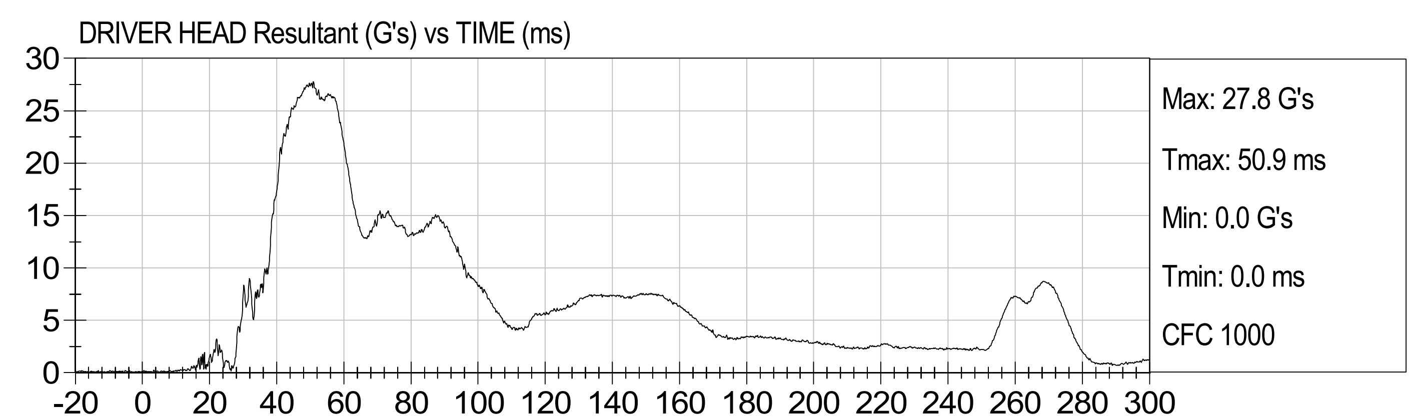
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

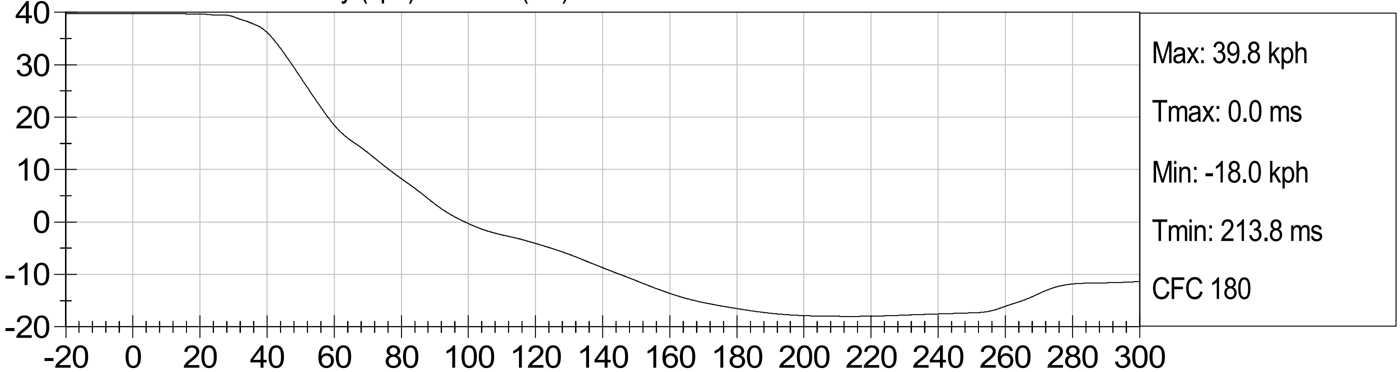




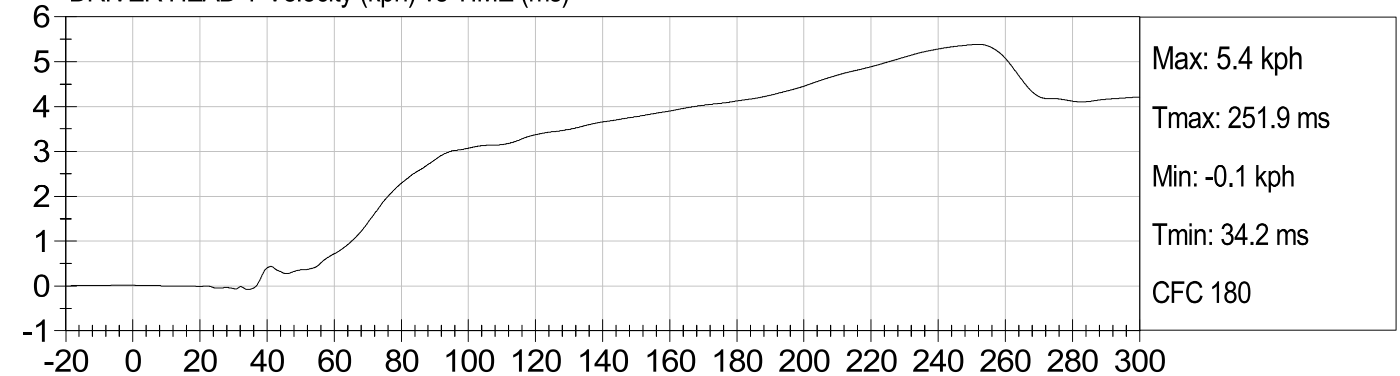




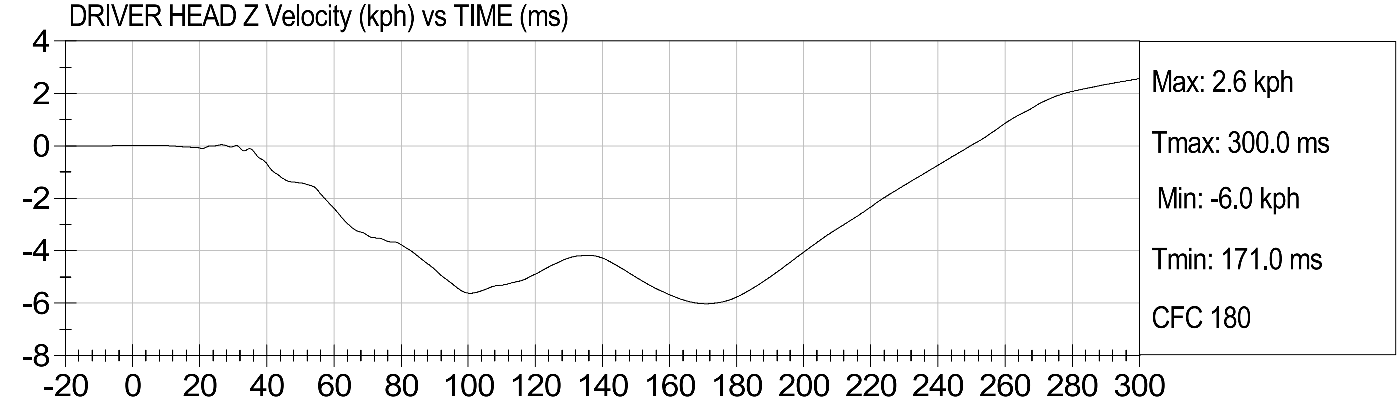
DRIVER HEAD X Velocity (kph) vs TIME (ms)



DRIVER HEAD Y Velocity (kph) vs TIME (ms)



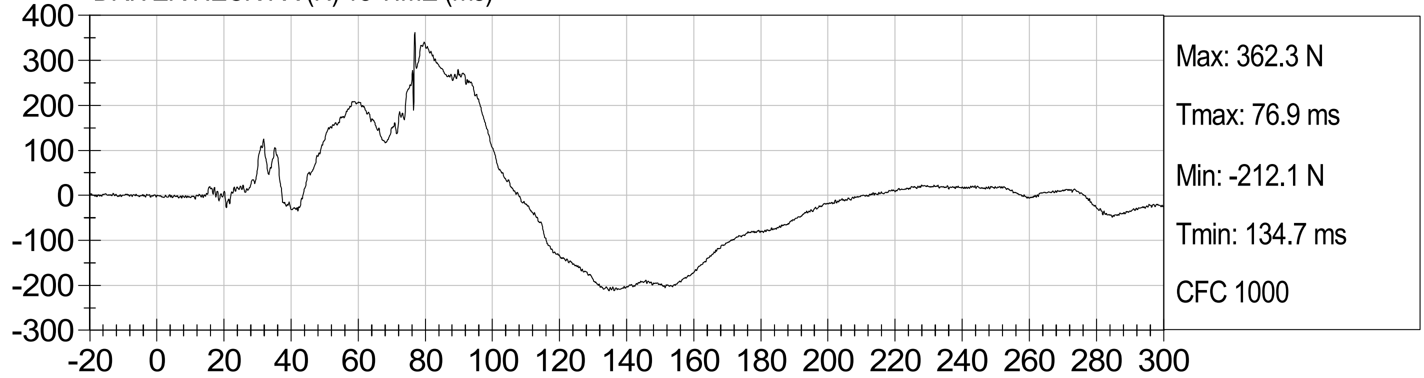
DRIVER HEAD Z Velocity (kph) vs TIME (ms)



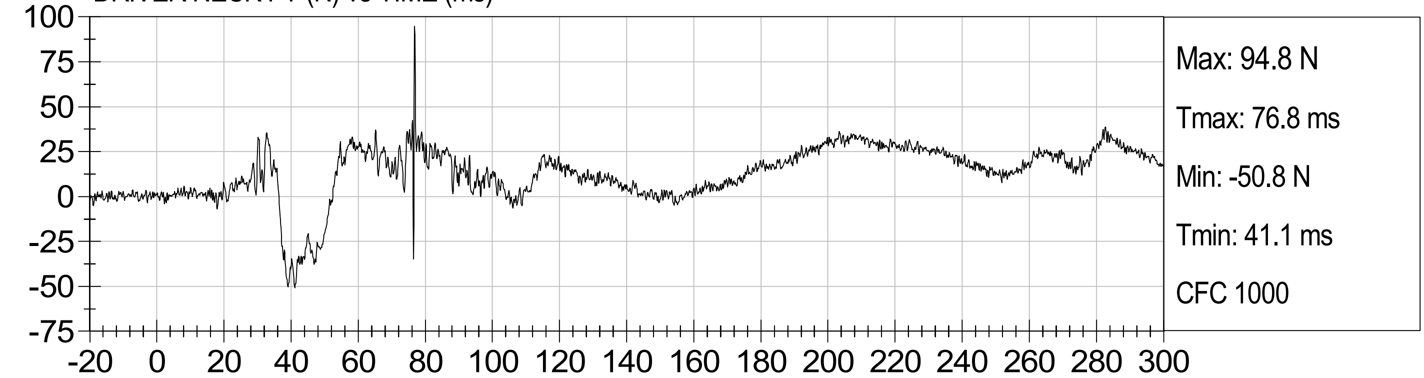
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

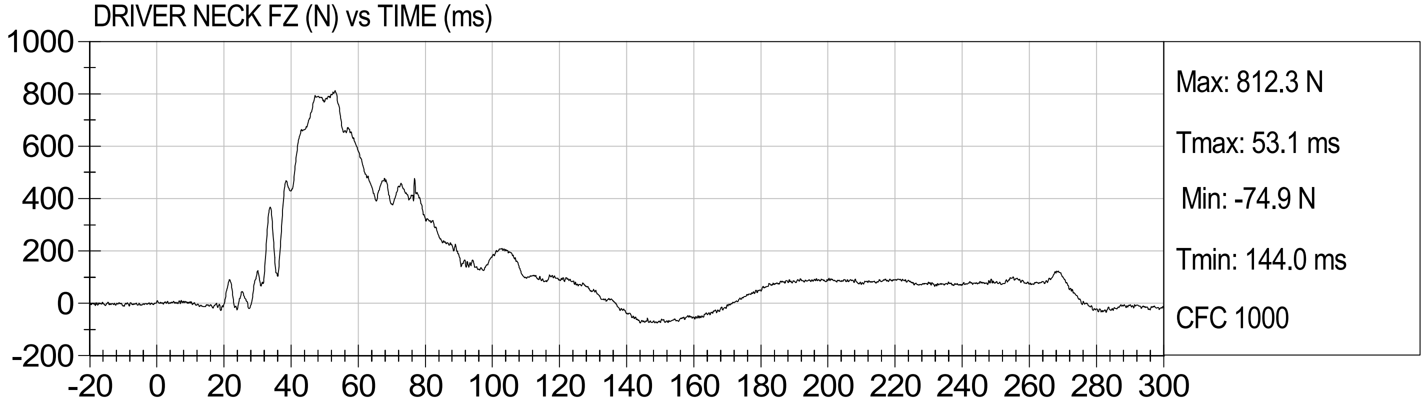
DRIVER NECK FX (N) vs TIME (ms)



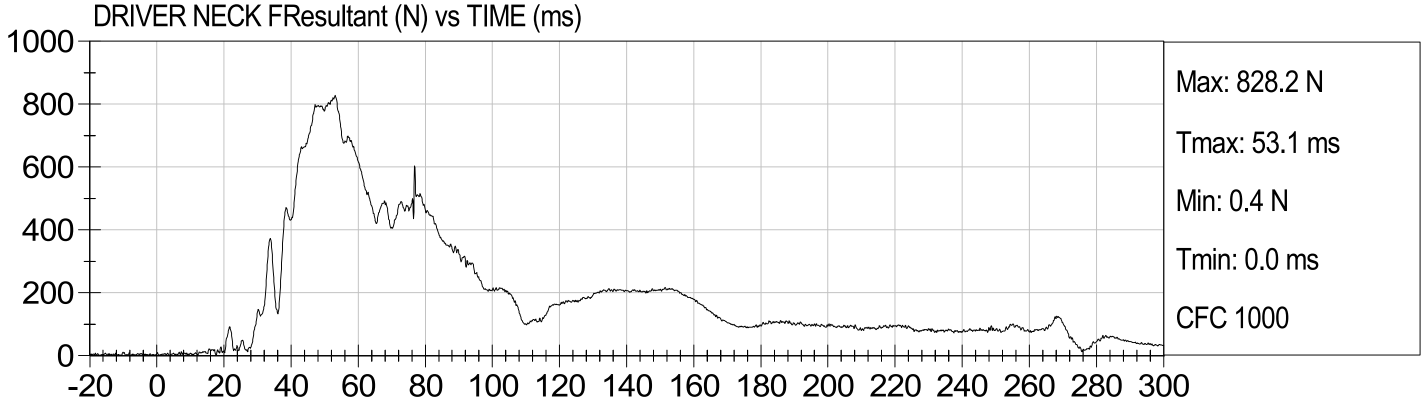
DRIVER NECK FY (N) vs TIME (ms)



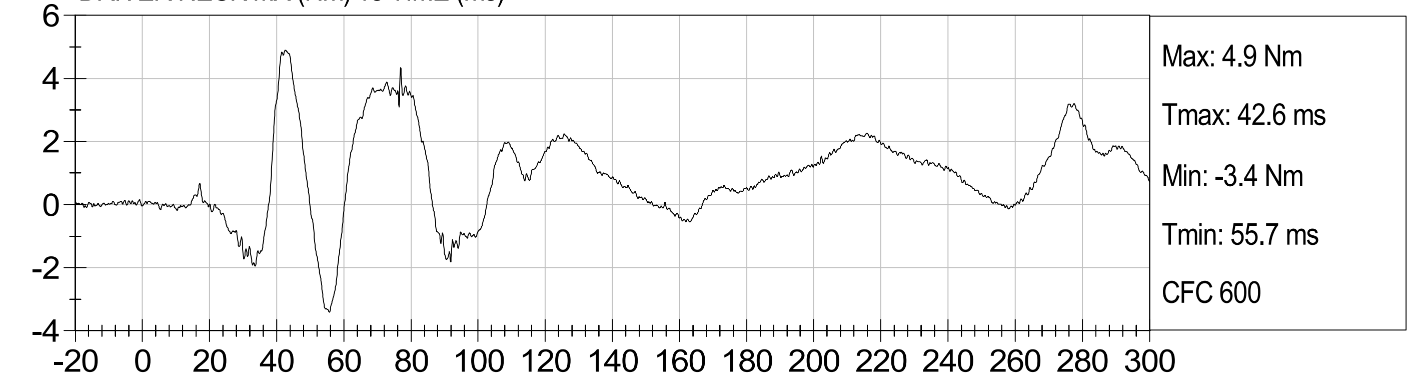
DRIVER NECK FZ (N) vs TIME (ms)



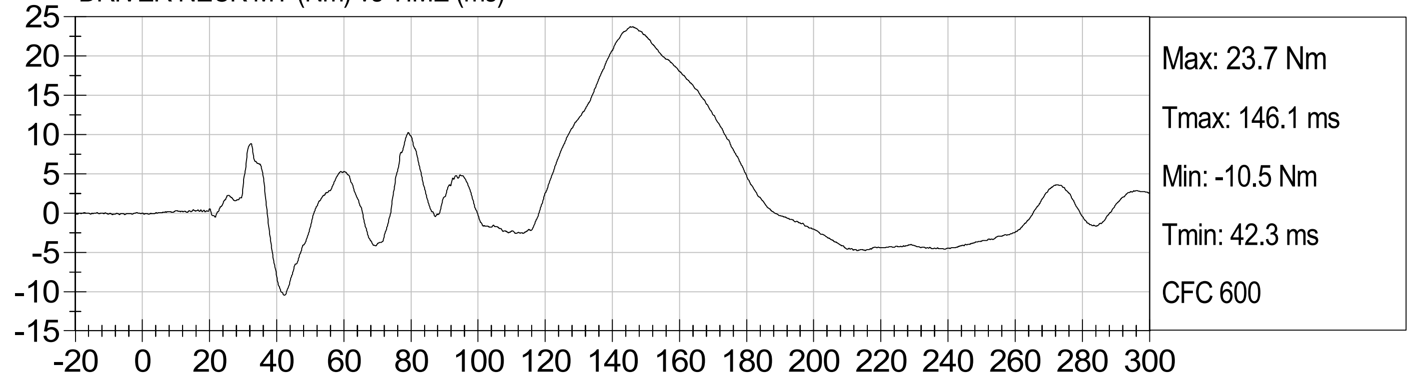
DRIVER NECK FResultant (N) vs TIME (ms)



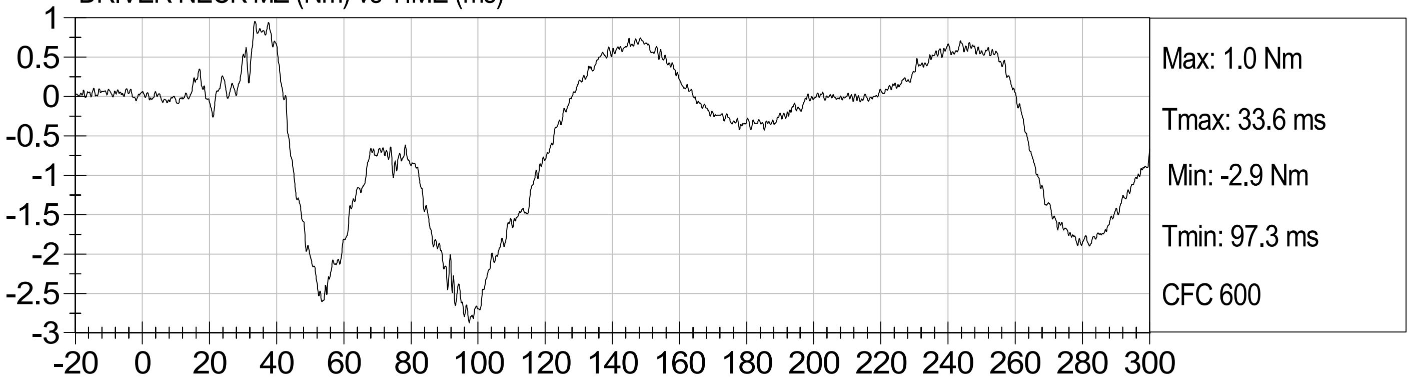
DRIVER NECK MX (Nm) vs TIME (ms)



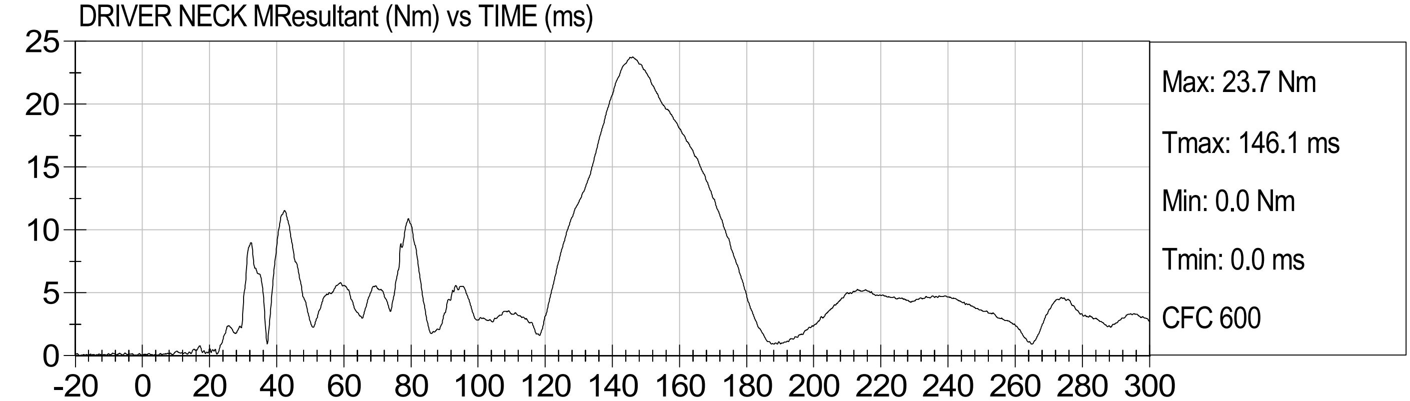
DRIVER NECK MY (Nm) vs TIME (ms)



DRIVER NECK MZ (Nm) vs TIME (ms)



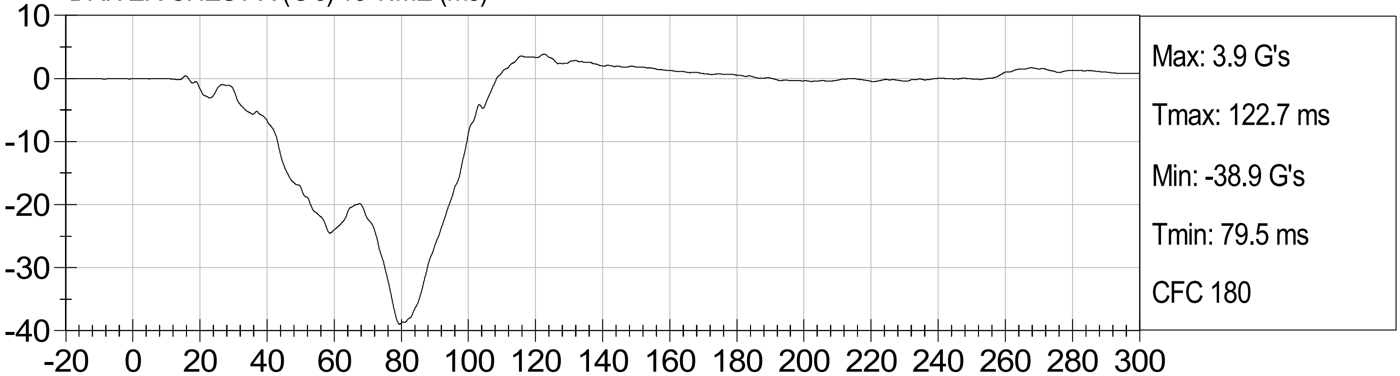
DRIVER NECK MResultant (Nm) vs TIME (ms)



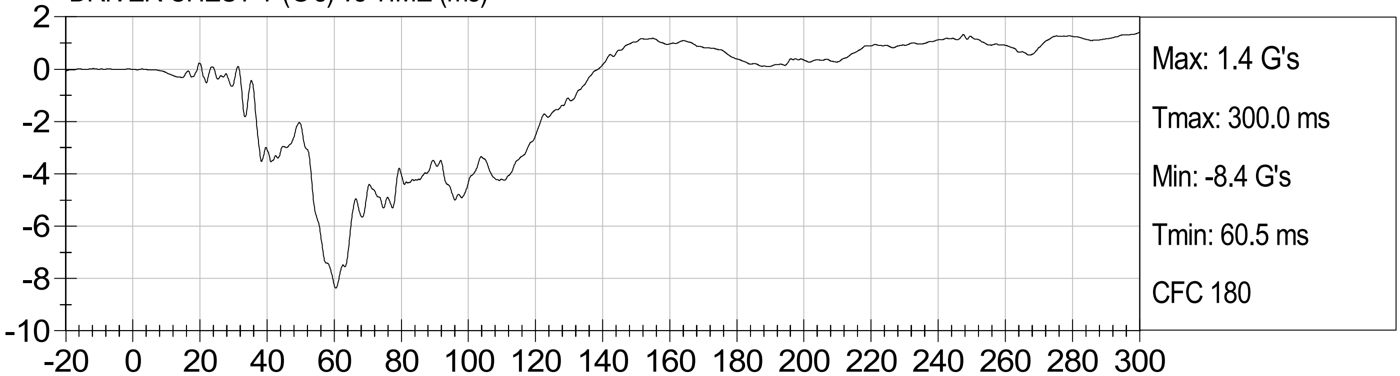
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

DRIVER CHEST X (G's) vs TIME (ms)

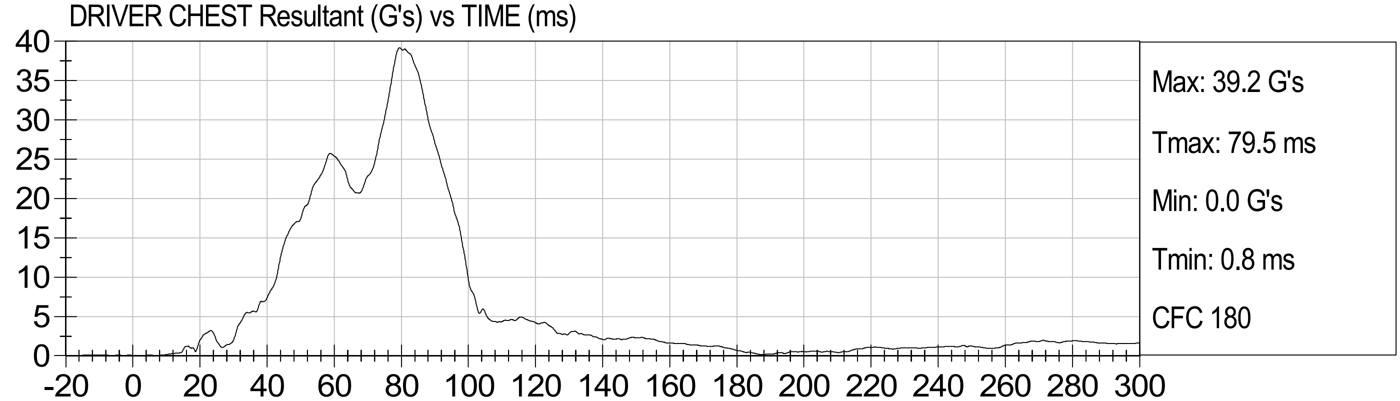


DRIVER CHEST Y (G's) vs TIME (ms)



DRIVER CHEST Z (G's) vs TIME (ms)

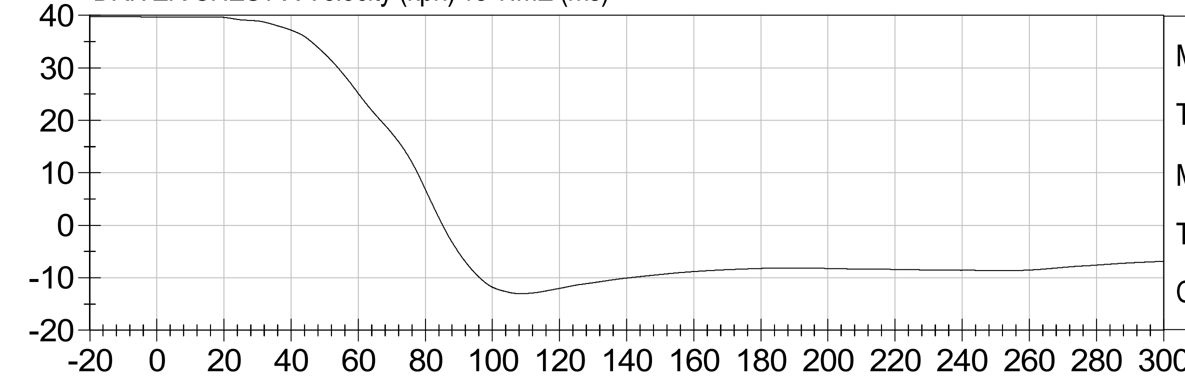
DRIVER CHEST Resultant (G's) vs TIME (ms)



25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

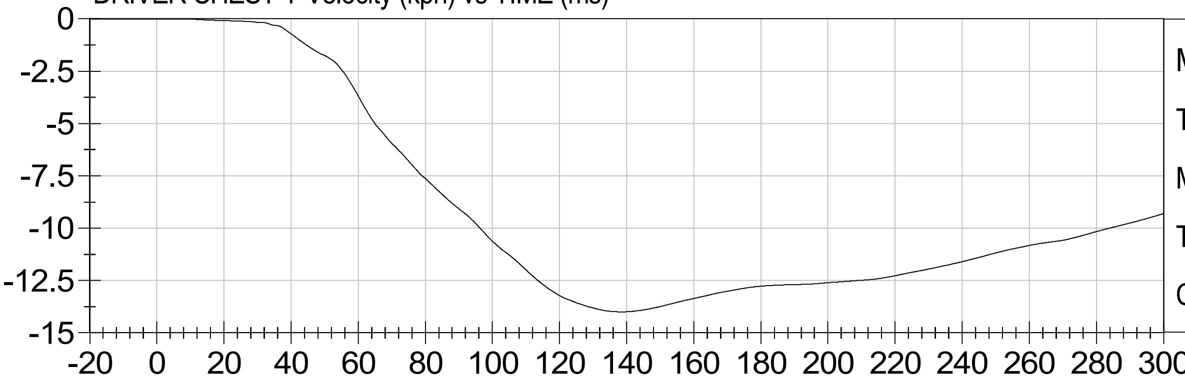
Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

DRIVER CHEST X Velocity (kph) vs TIME (ms)



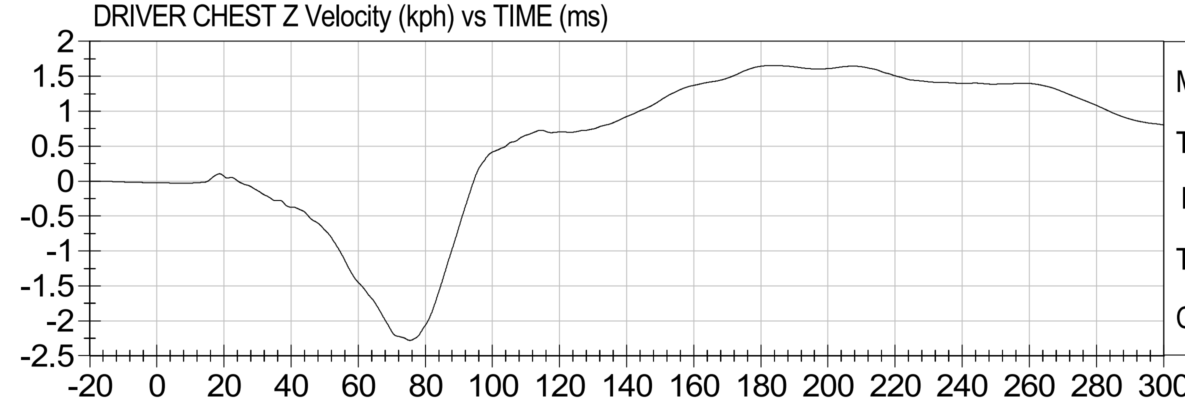
Max: 39.8 kph
Tmax: 0.0 ms
Min: -13.0 kph
Tmin: 108.4 ms
CFC 180

DRIVER CHEST Y Velocity (kph) vs TIME (ms)



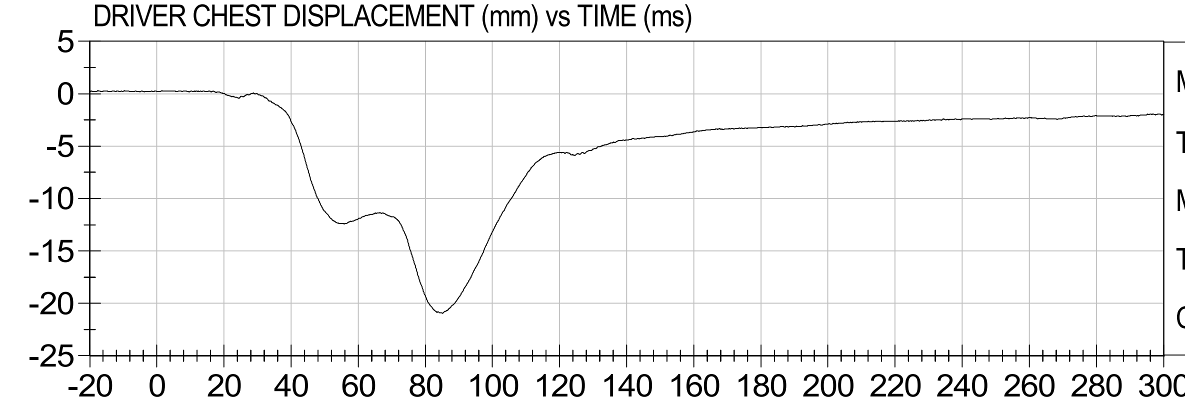
Max: 0.0 kph
Tmax: 0.0 ms
Min: -14.0 kph
Tmin: 138.6 ms
CFC 180

DRIVER CHEST Z Velocity (kph) vs TIME (ms)



Max: 1.7 kph
Tmax: 184.1 ms
Min: -2.3 kph
Tmin: 75.5 ms
CFC 180

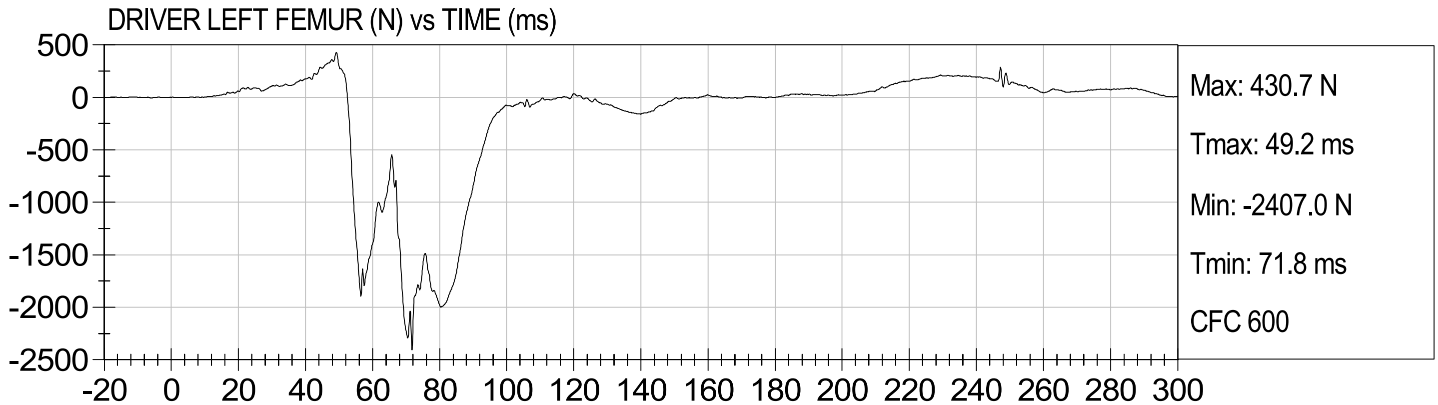
DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

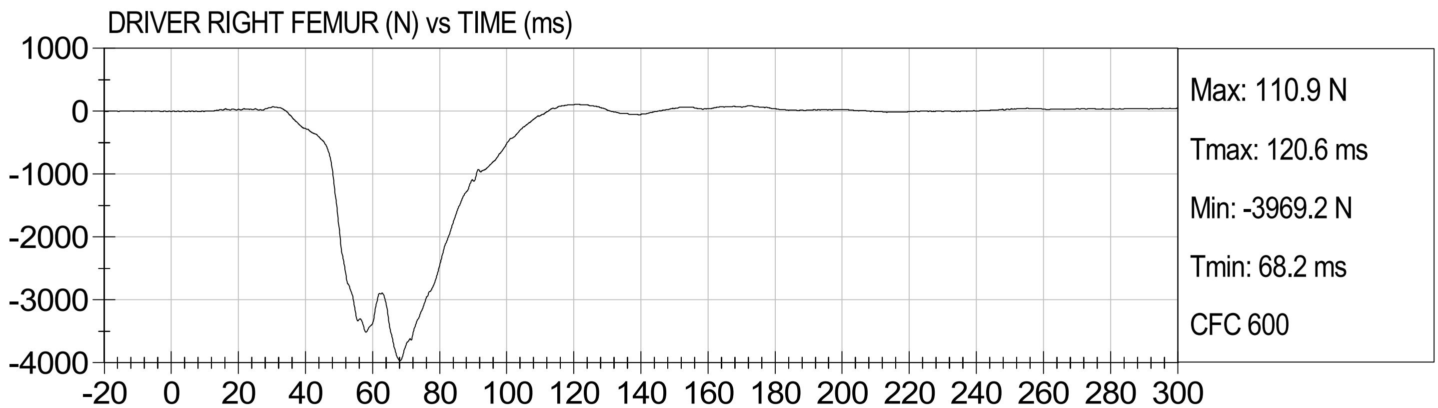


Max: 0.3 mm
Tmax: 1.5 ms
Min: -20.9 mm
Tmin: 85.1 ms
CFC 600

25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

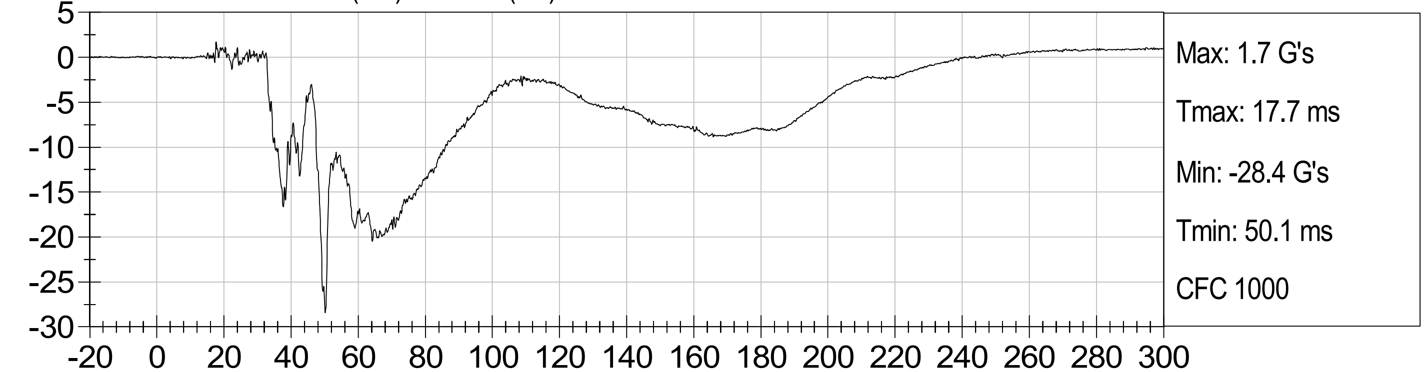




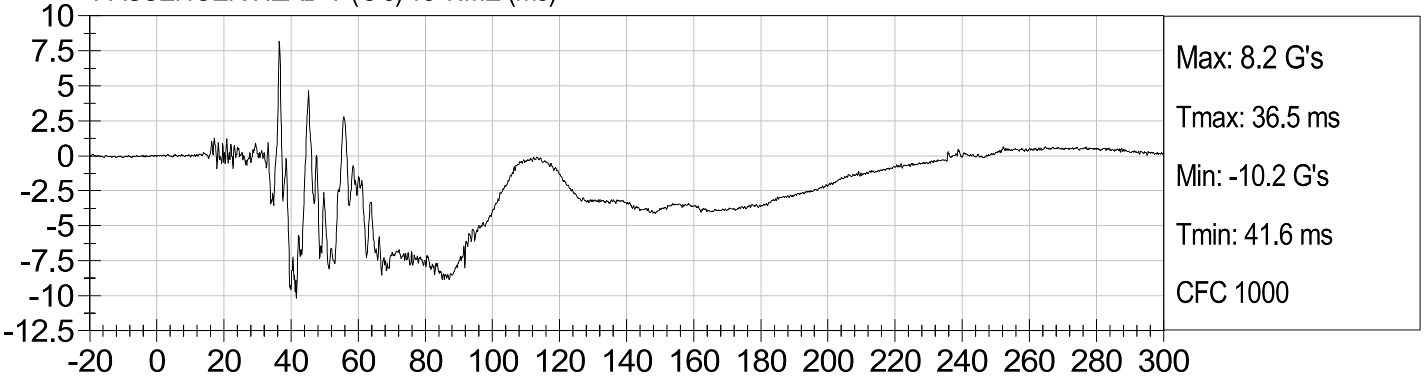
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

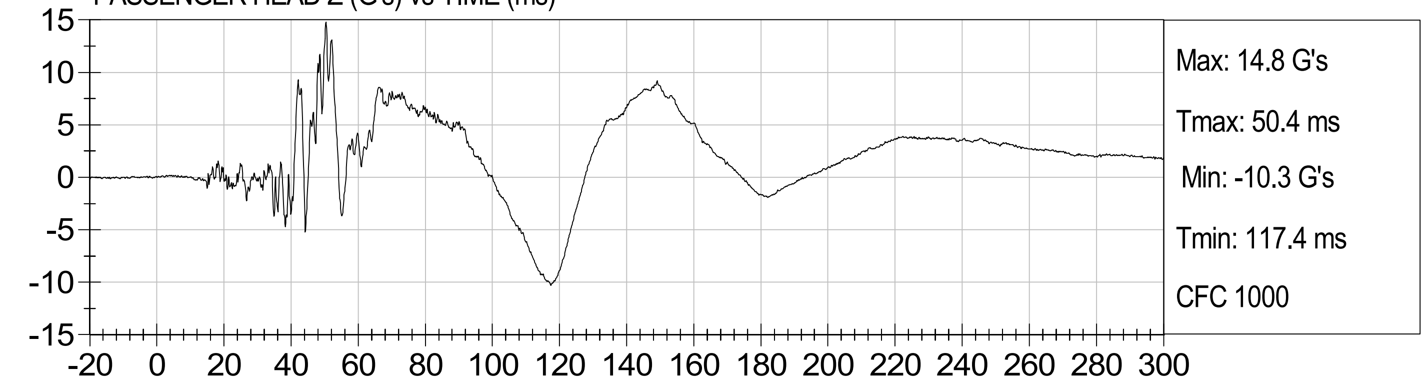
PASSENGER HEAD X (G's) vs TIME (ms)



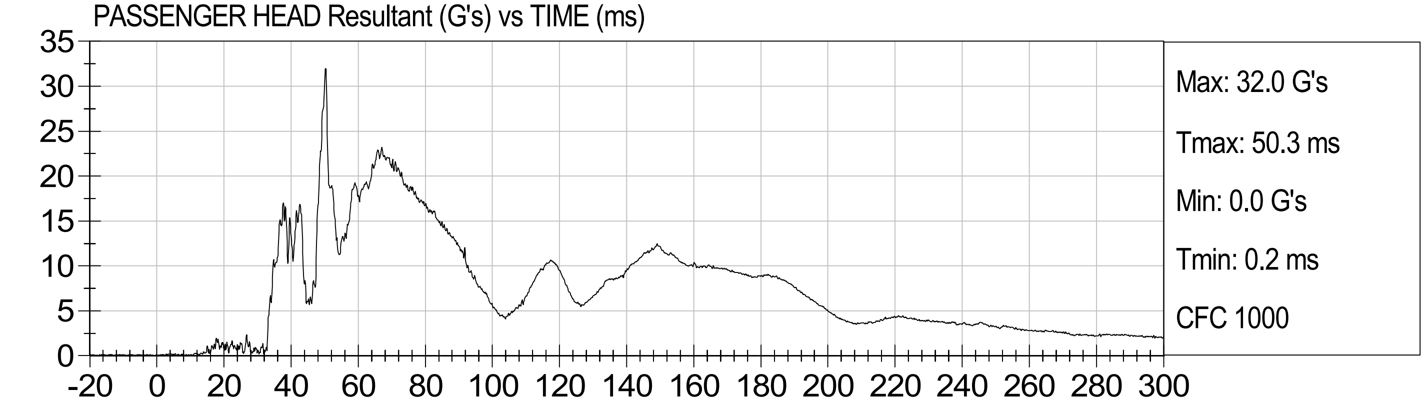
PASSENGER HEAD Y (G's) vs TIME (ms)



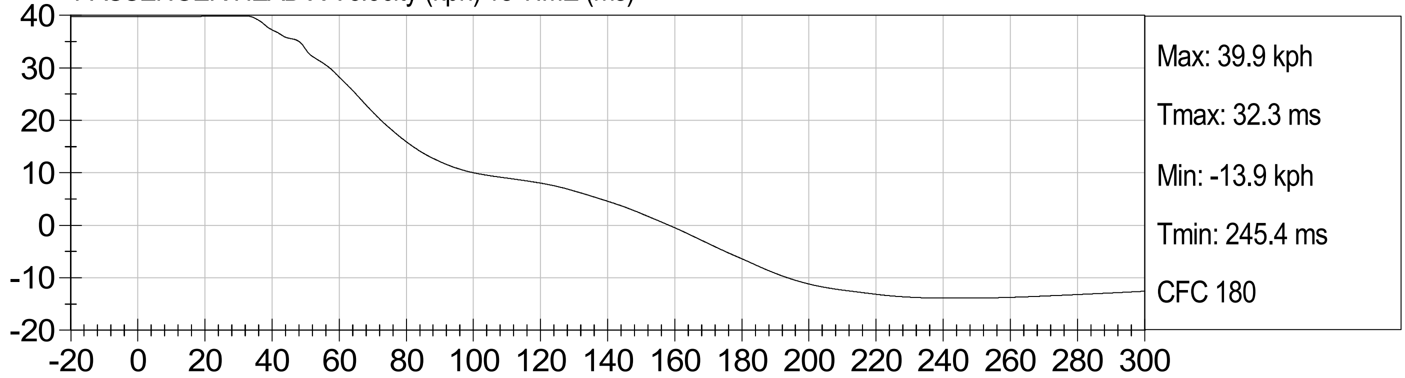
PASSENGER HEAD Z (G's) vs TIME (ms)



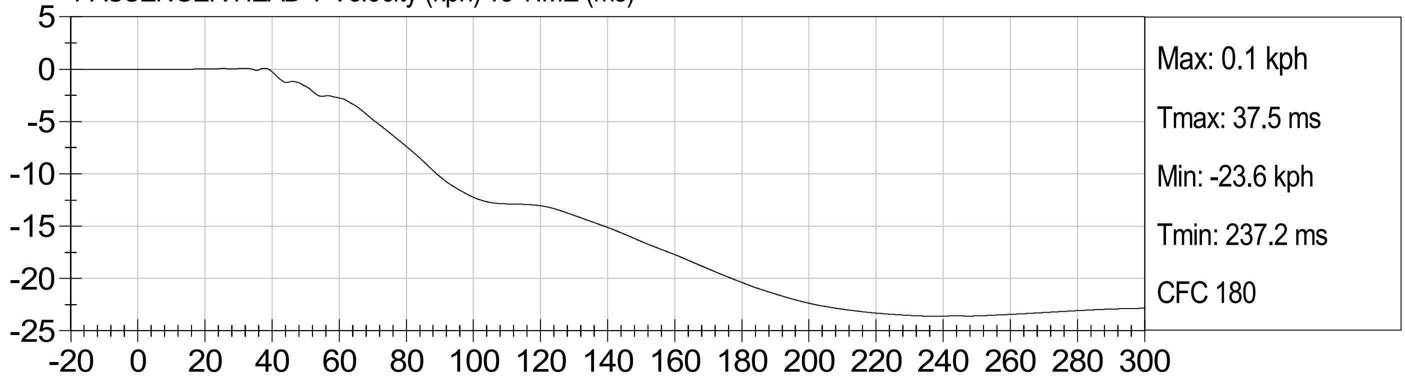
PASSENGER HEAD Resultant (G's) vs TIME (ms)



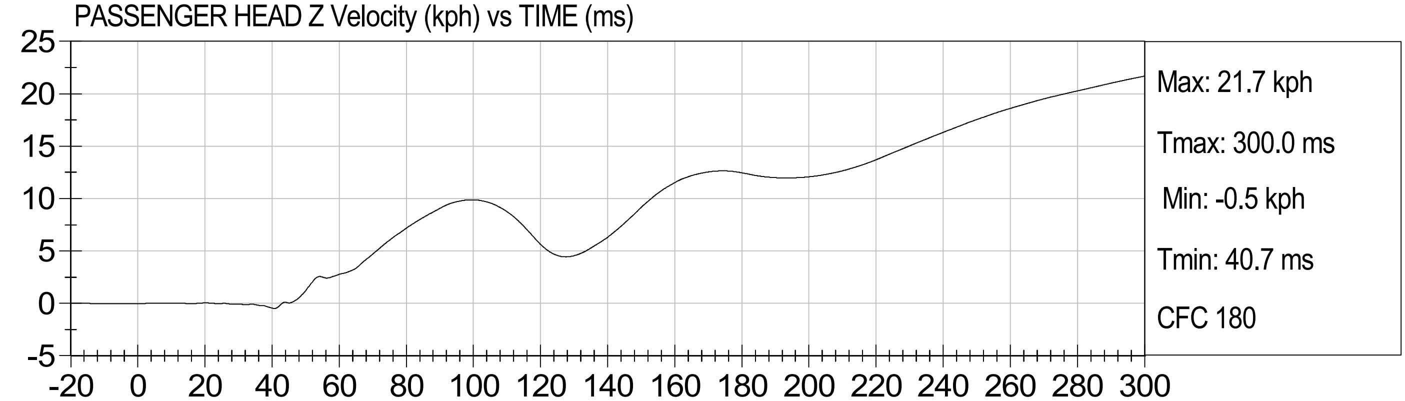
PASSENGER HEAD X Velocity (kph) vs TIME (ms)

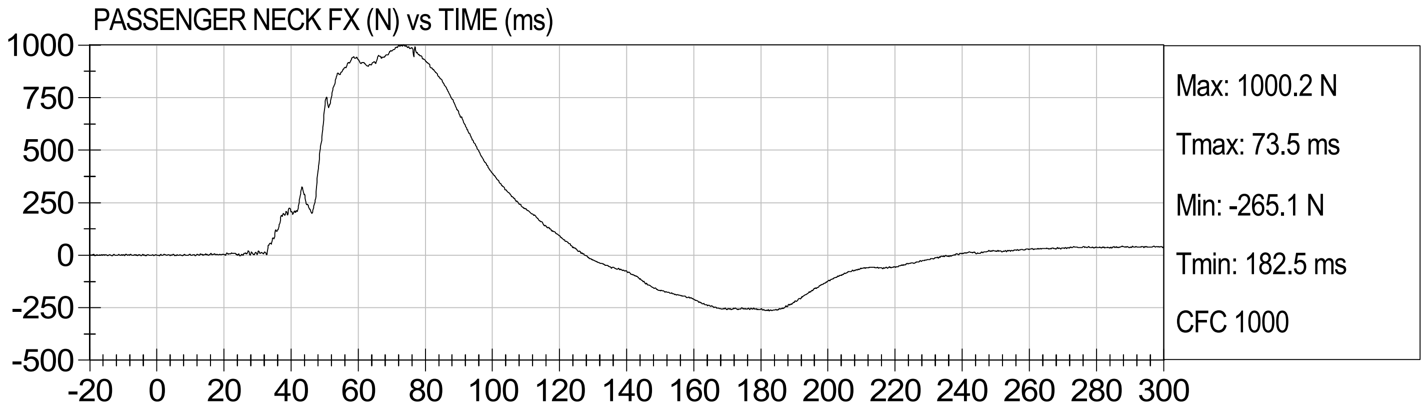


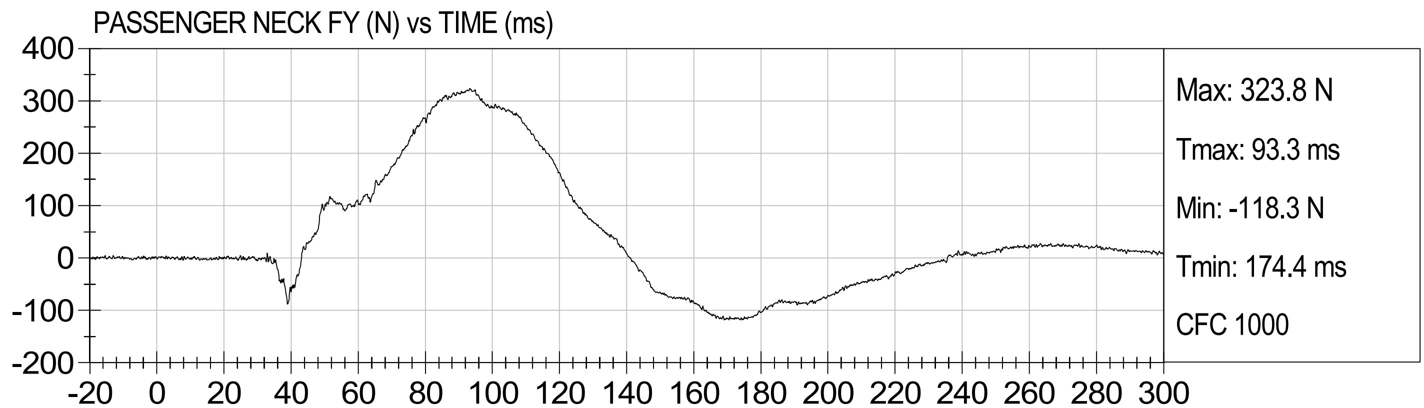
PASSENGER HEAD Y Velocity (kph) vs TIME (ms)

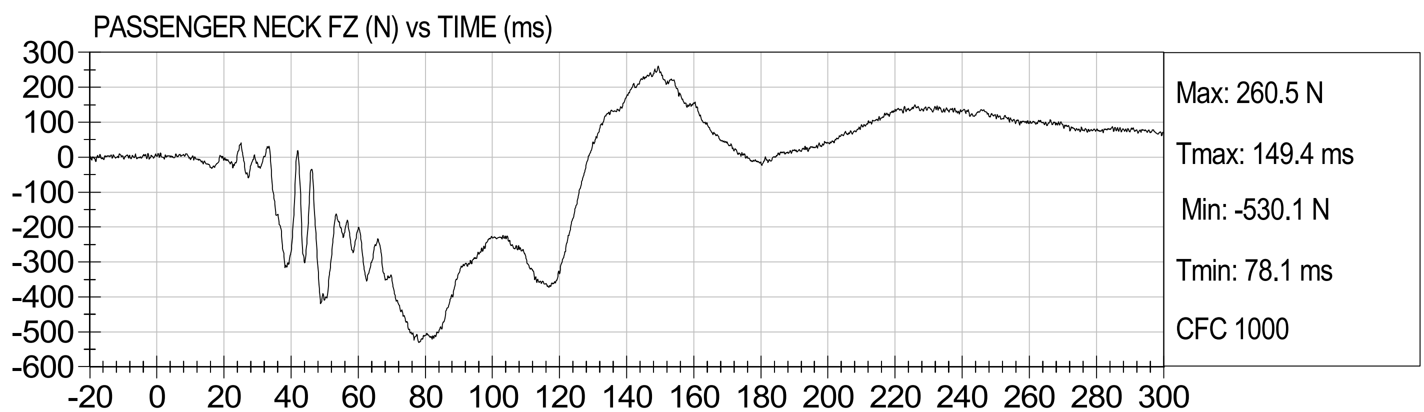


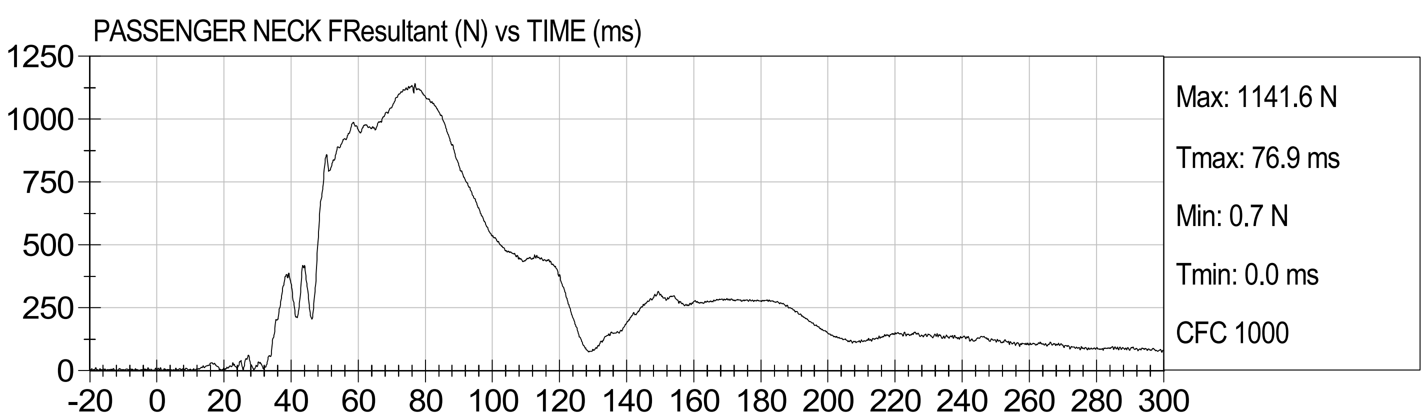
PASSENGER HEAD Z Velocity (kph) vs TIME (ms)



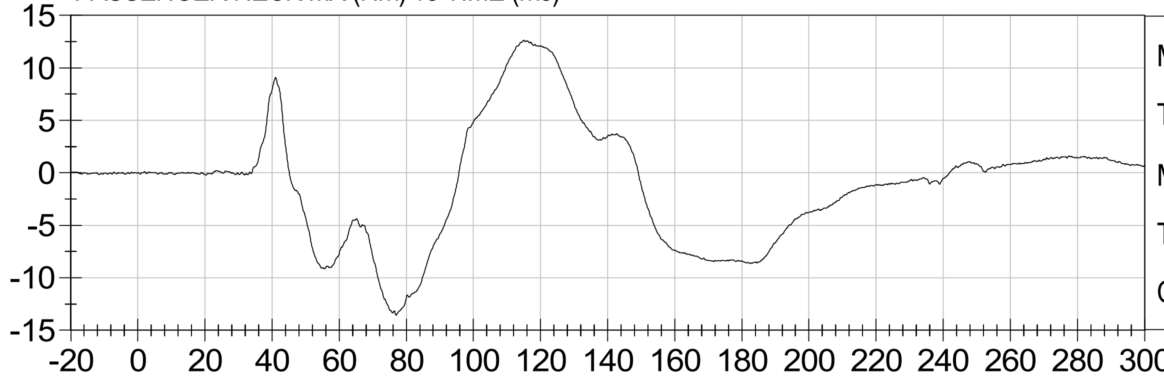

PASSENGER NECK FX (N) vs TIME (ms)
1000
750
500
250
0
-250
-500
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 1000.2 N
Tmax: 73.5 ms
Min: -265.1 N
Tmin: 182.5 ms
CFC 1000


PASSENGER NECK FY (N) vs TIME (ms)
400
300
200
100
0
-100
-200
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 323.8 N
Tmax: 93.3 ms
Min: -118.3 N
Tmin: 174.4 ms
CFC 1000


PASSENGER NECK FZ (N) vs TIME (ms)
300
200
100
0
-100
-200
-300
-400
-500
-600
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 260.5 N
Tmax: 149.4 ms
Min: -530.1 N
Tmin: 78.1 ms
CFC 1000

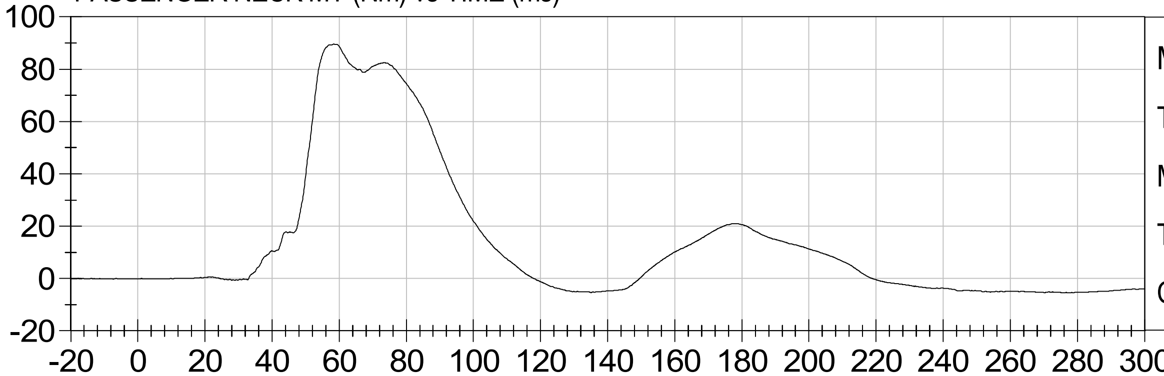

PASSENGER NECK FResultant (N) vs TIME (ms)
1250
1000
750
500
250
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 1141.6 N
Tmax: 76.9 ms
Min: 0.7 N
Tmin: 0.0 ms
CFC 1000

PASSENGER NECK MX (Nm) vs TIME (ms)



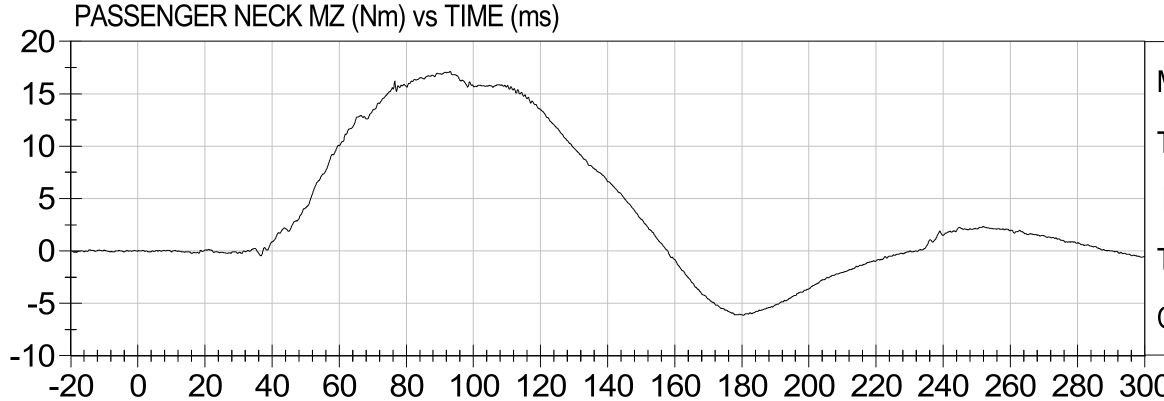
Max: 12.6 Nm
Tmax: 115.0 ms
Min: -13.6 Nm
Tmin: 76.9 ms
CFC 600

PASSENGER NECK MY (Nm) vs TIME (ms)



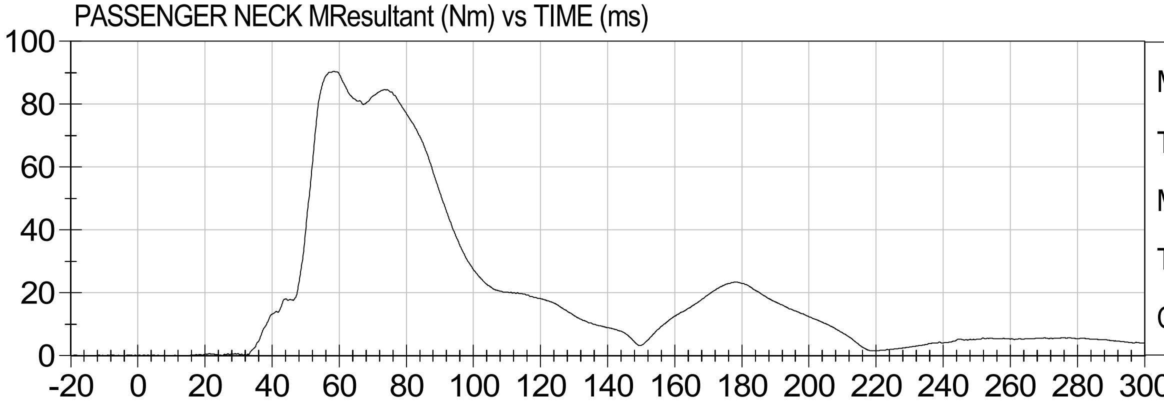
Max: 89.6 Nm
Tmax: 58.4 ms
Min: -5.4 Nm
Tmin: 275.5 ms
CFC 600

PASSENGER NECK MZ (Nm) vs TIME (ms)



Max: 17.1 Nm
Tmax: 93.1 ms
Min: -6.1 Nm
Tmin: 180.4 ms
CFC 600

PASSENGER NECK MResultant (Nm) vs TIME (ms)

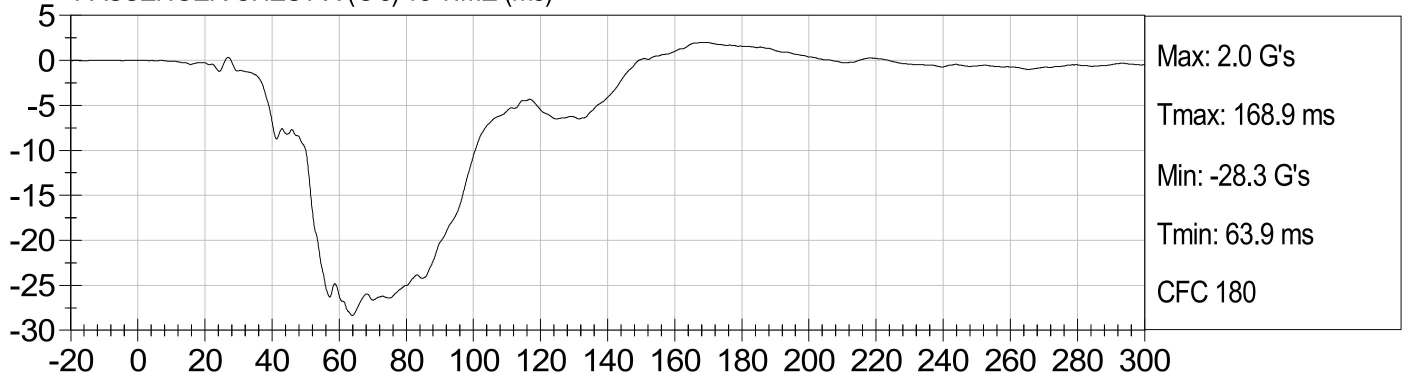


Max: 90.5 Nm
Tmax: 58.4 ms
Min: 0.0 Nm
Tmin: 12.0 ms
CFC 600

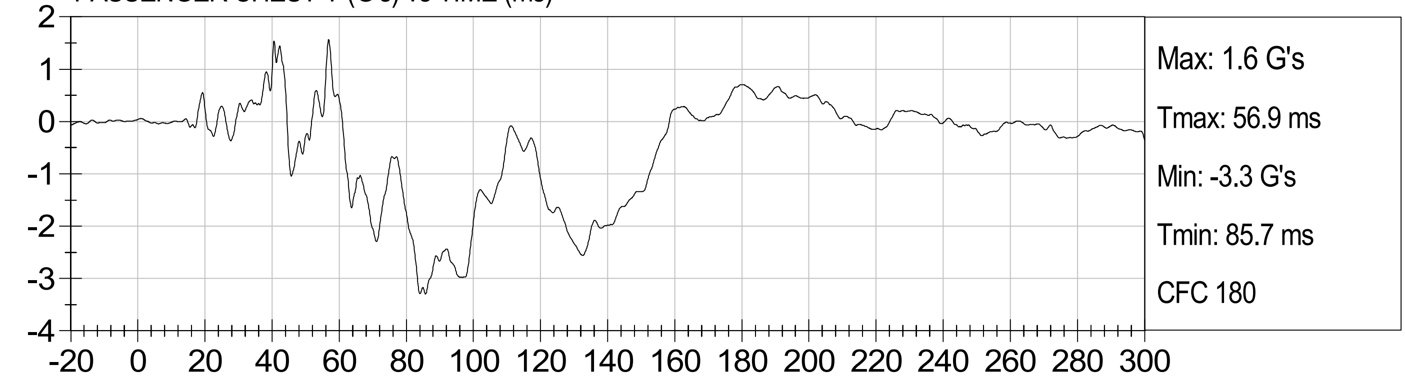
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

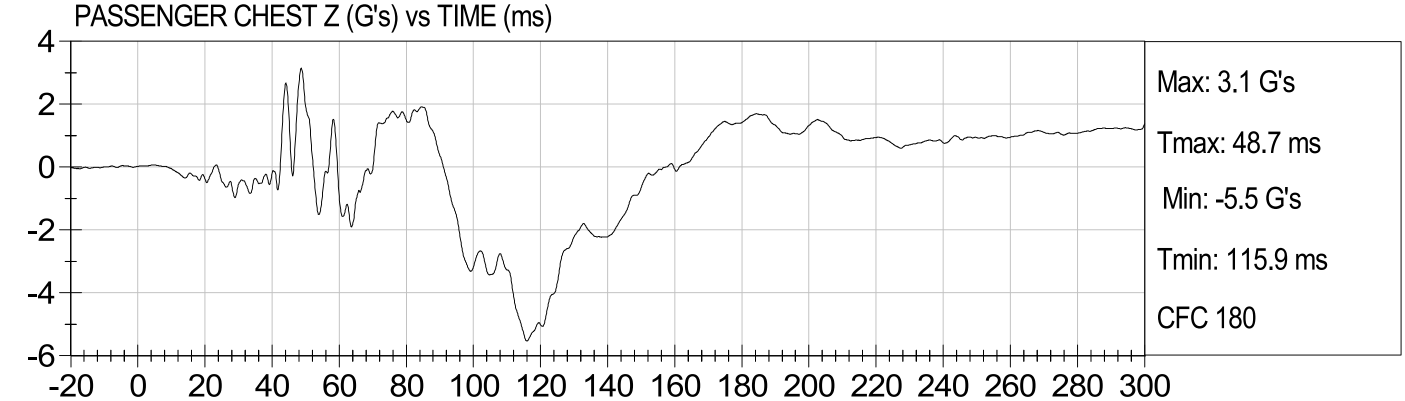
PASSENGER CHEST X (G's) vs TIME (ms)



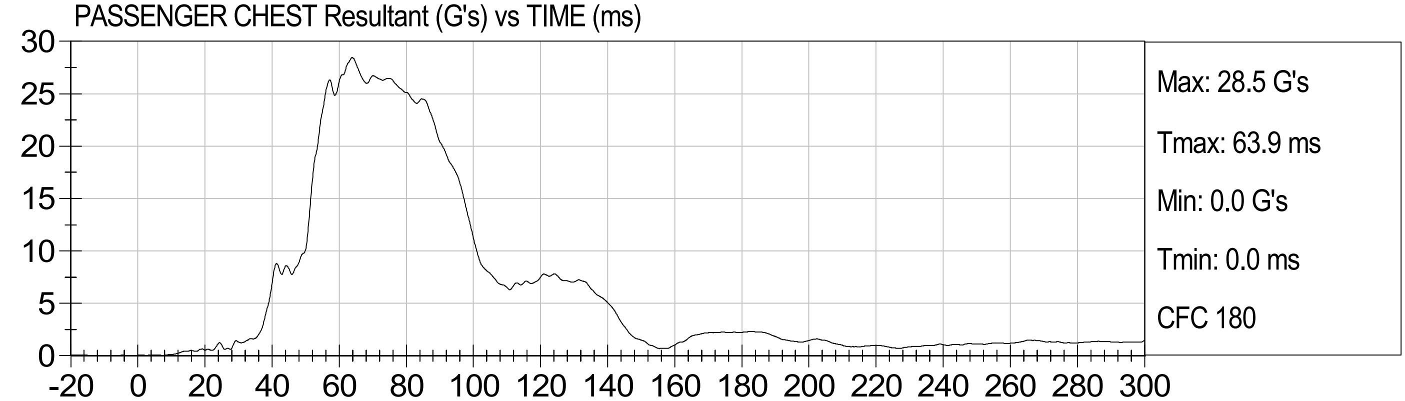
PASSENGER CHEST Y (G's) vs TIME (ms)



PASSENGER CHEST Z (G's) vs TIME (ms)



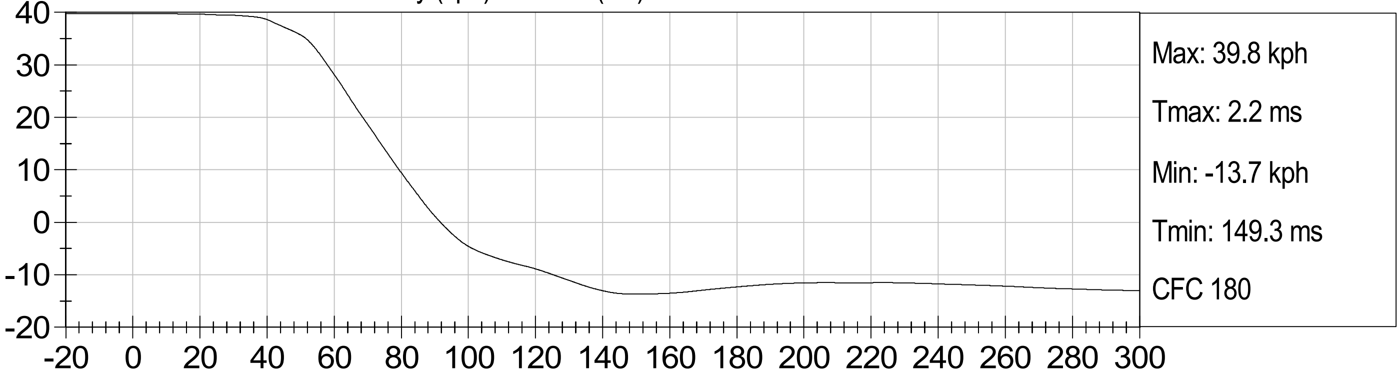
PASSENGER CHEST Resultant (G's) vs TIME (ms)



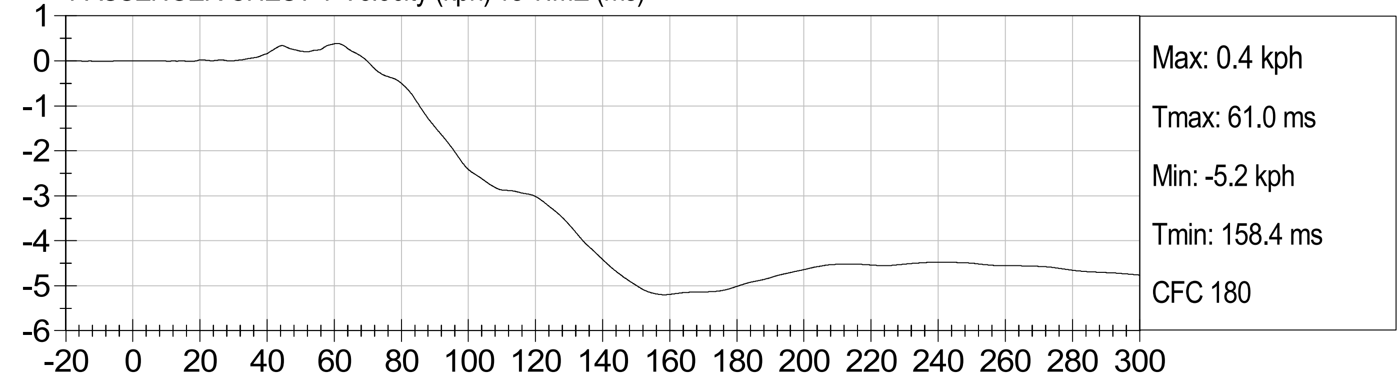
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

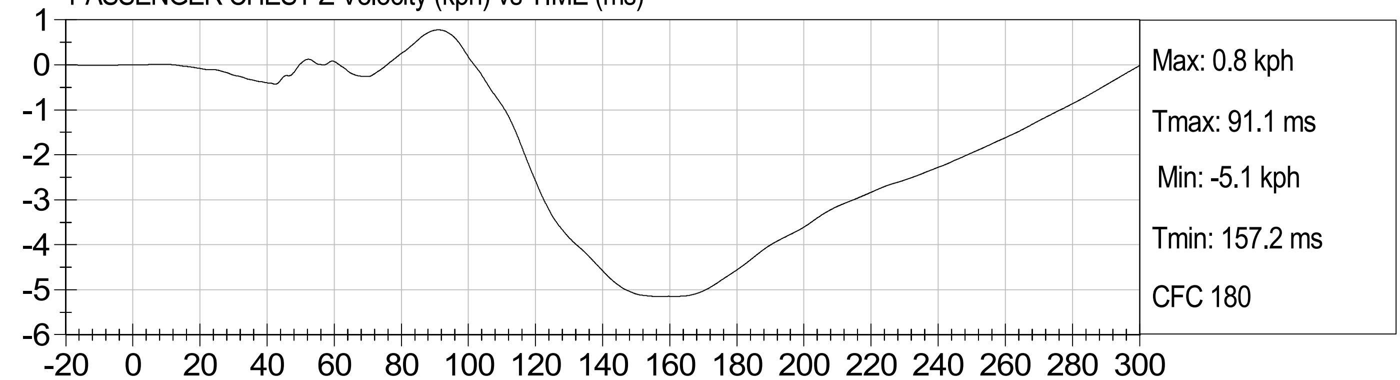
PASSENGER CHEST X Velocity (kph) vs TIME (ms)



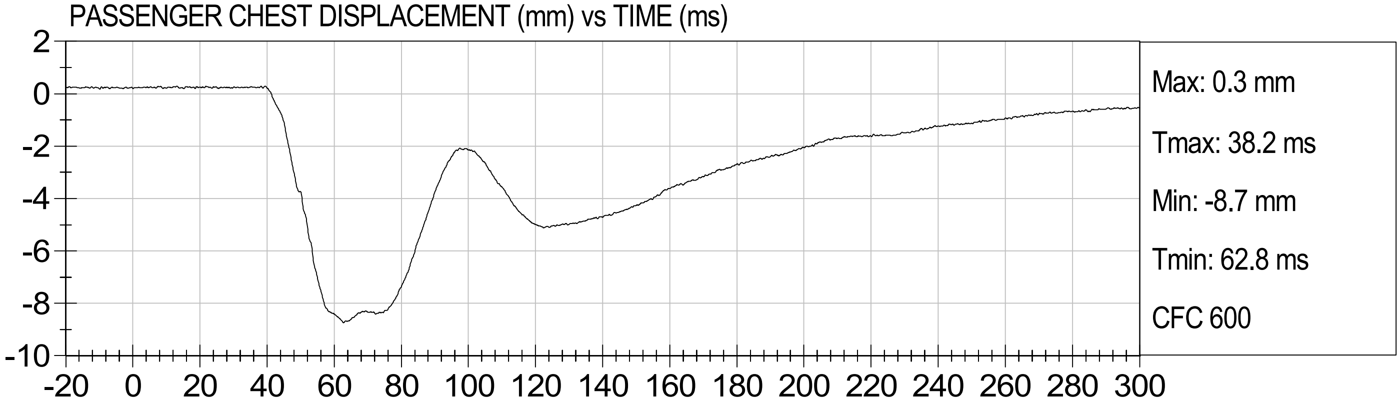
PASSENGER CHEST Y Velocity (kph) vs TIME (ms)

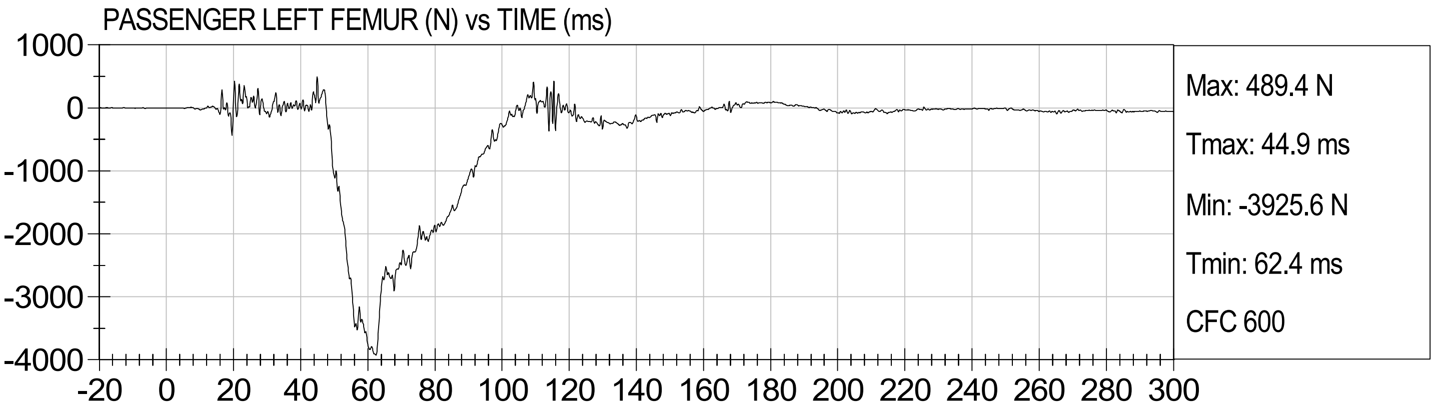


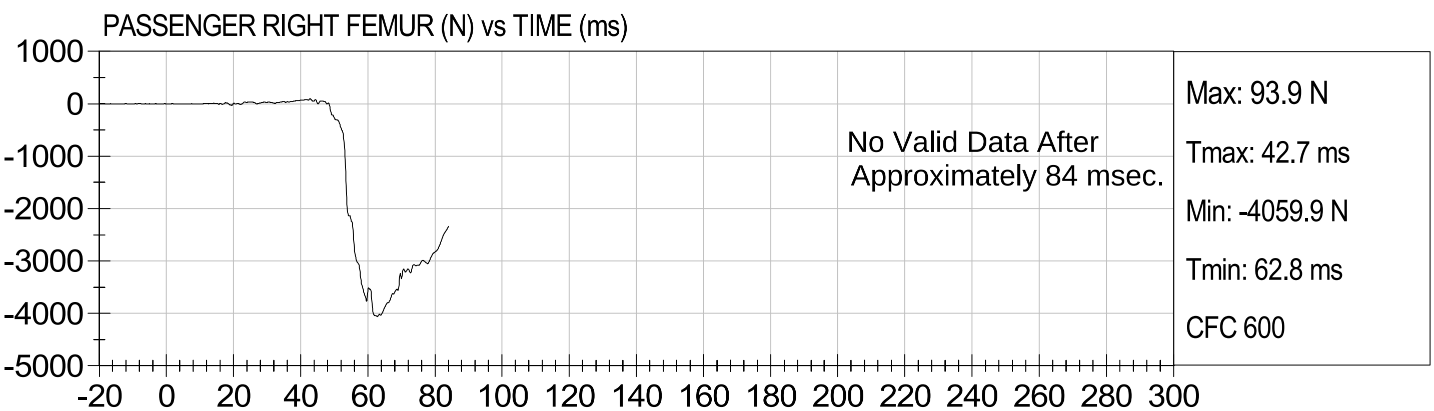
PASSENGER CHEST Z Velocity (kph) vs TIME (ms)



PASSENGER CHEST DISPLACEMENT (mm) vs TIME (ms)

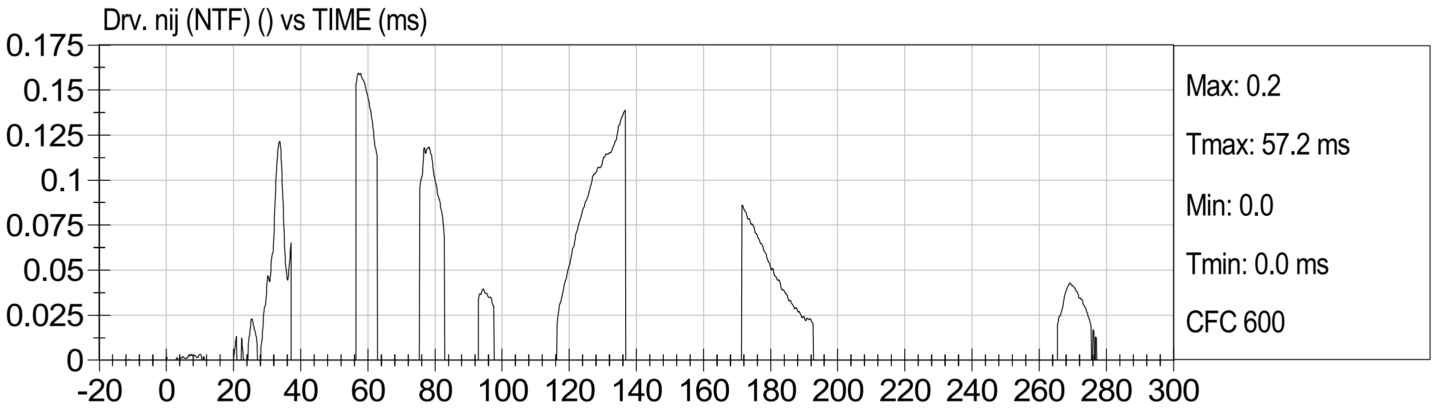


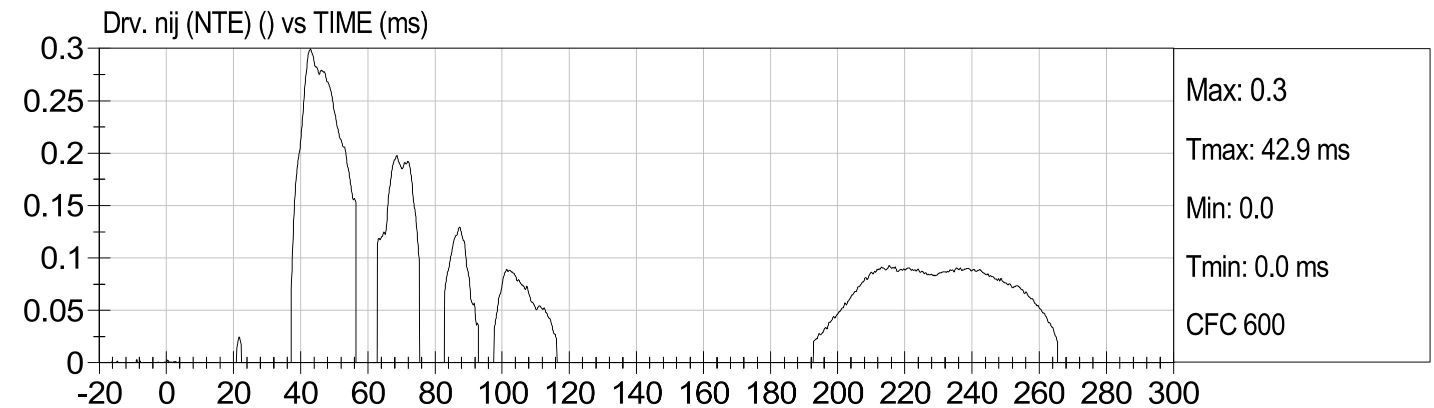

PASSENGER LEFT FEMUR (N) vs TIME (ms)
1000
0
-1000
-2000
-3000
-4000
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 489.4 N
Tmax: 44.9 ms
Min: -3925.6 N
Tmin: 62.4 ms
CFC 600

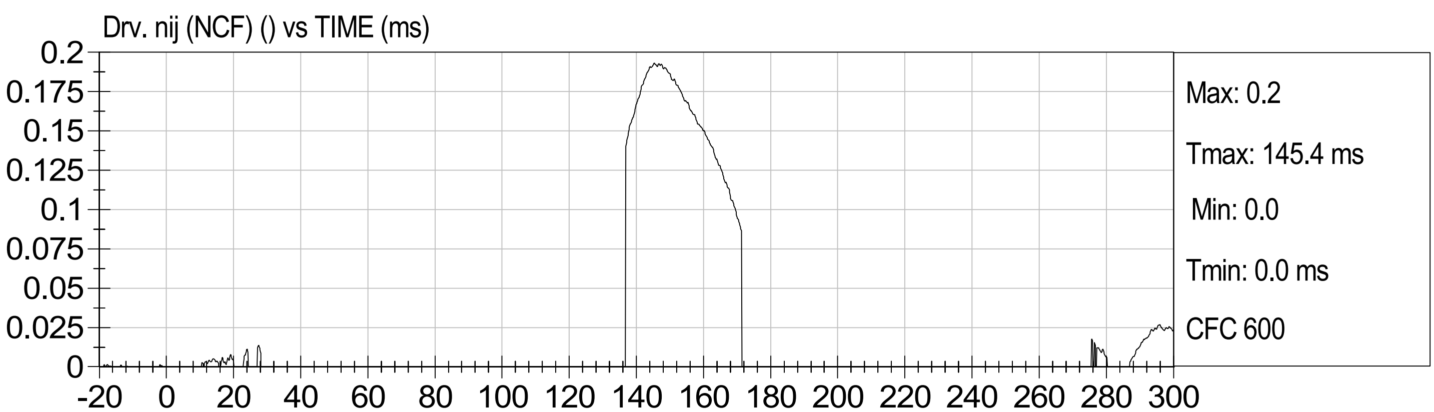

PASSENGER RIGHT FEMUR (N) vs TIME (ms)
1000
0
-1000
-2000
-3000
-4000
-5000
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
No Valid Data After
Approximately 84 msec.
Max: 93.9 N
Tmax: 42.7 ms
Min: -4059.9 N
Tmin: 62.8 ms
CFC 600

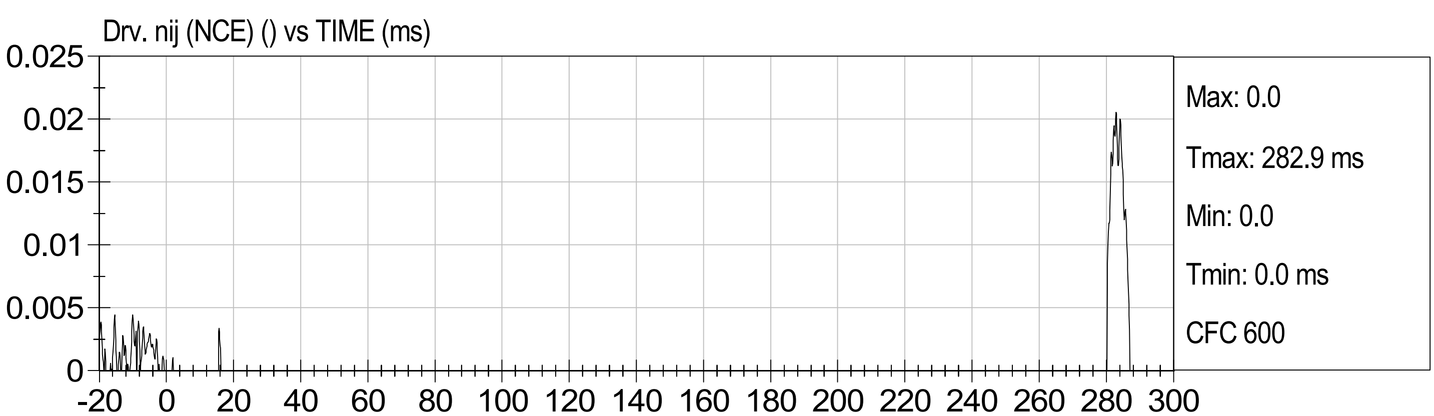
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)



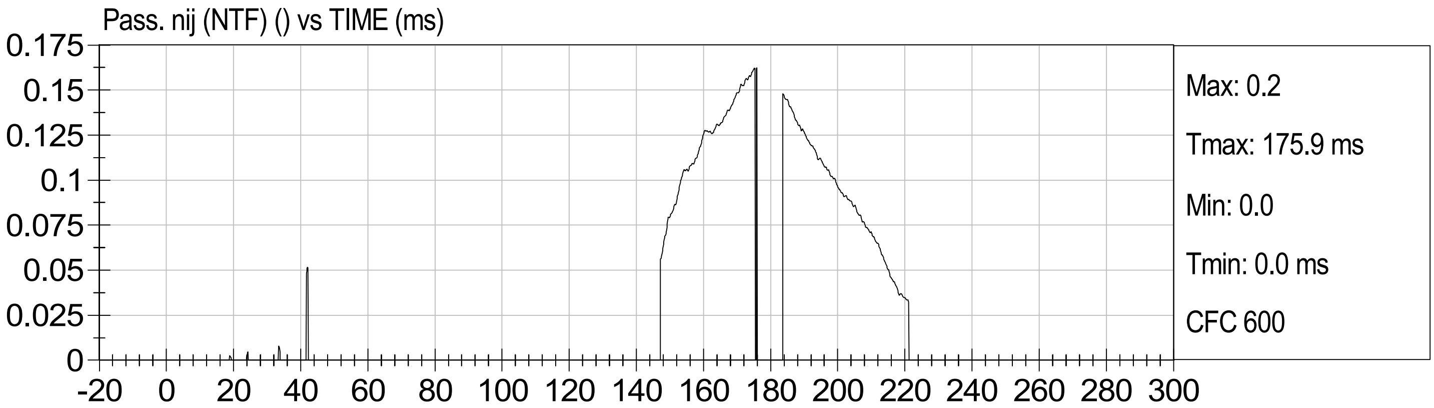


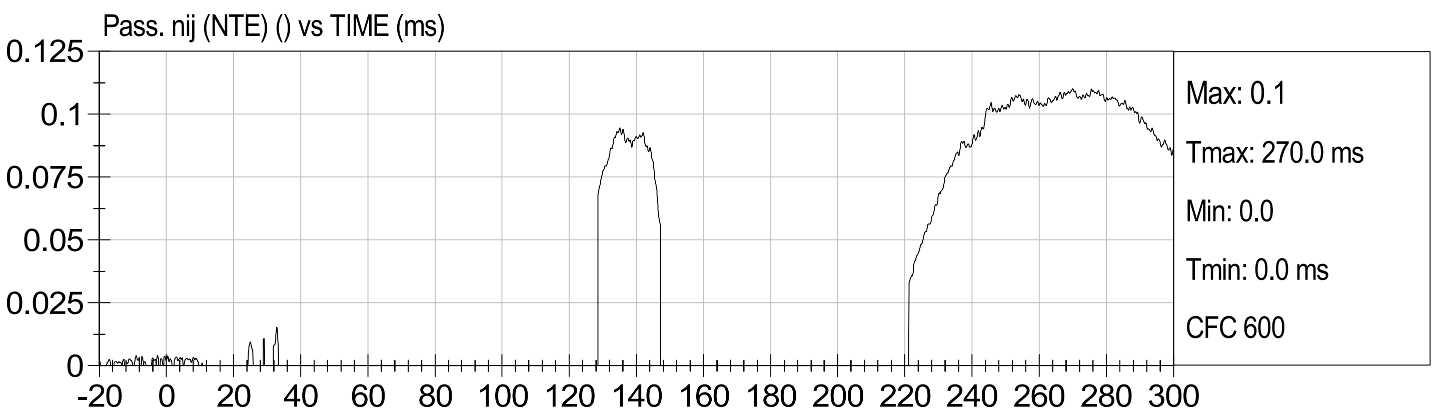


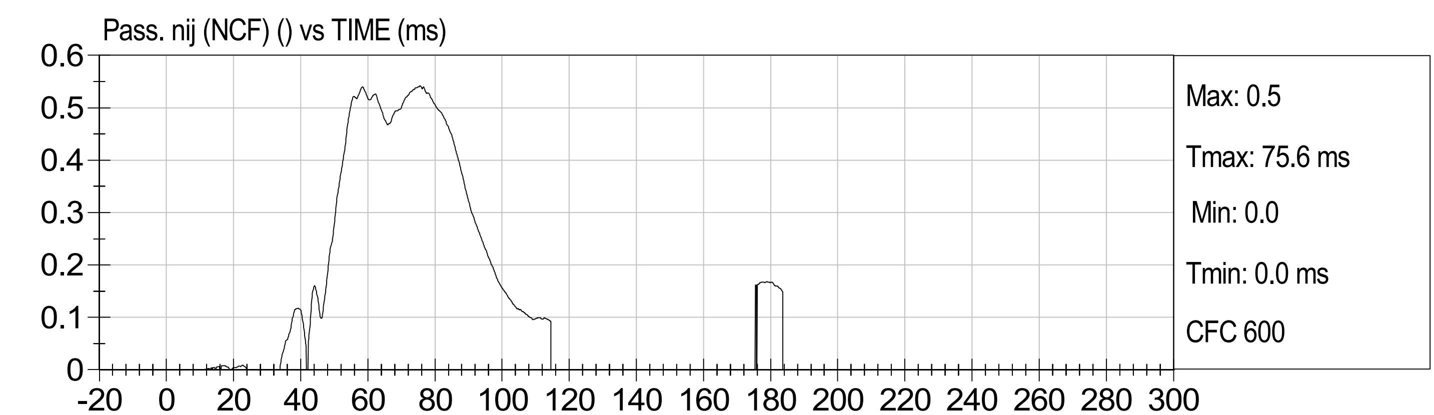


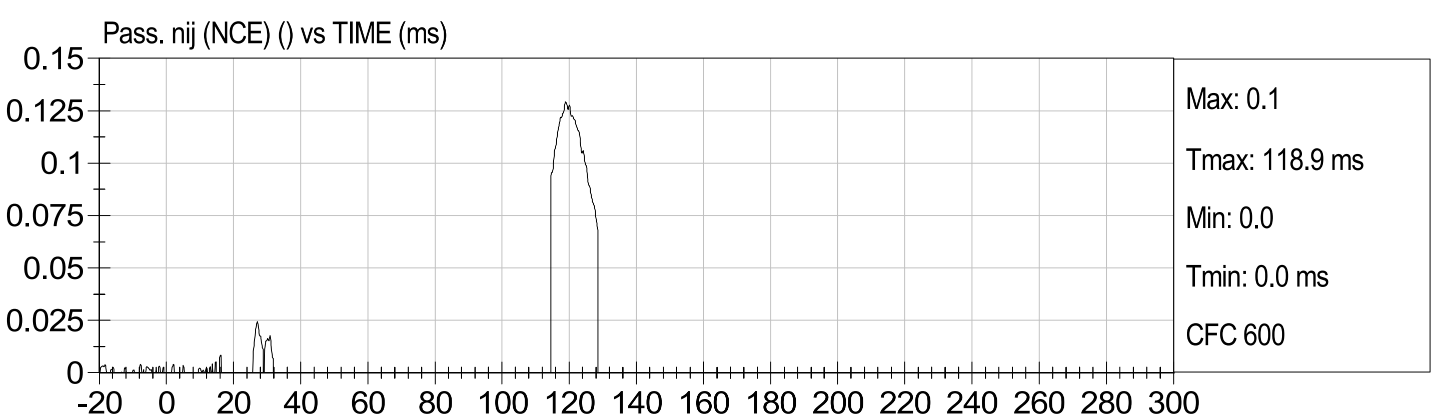
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

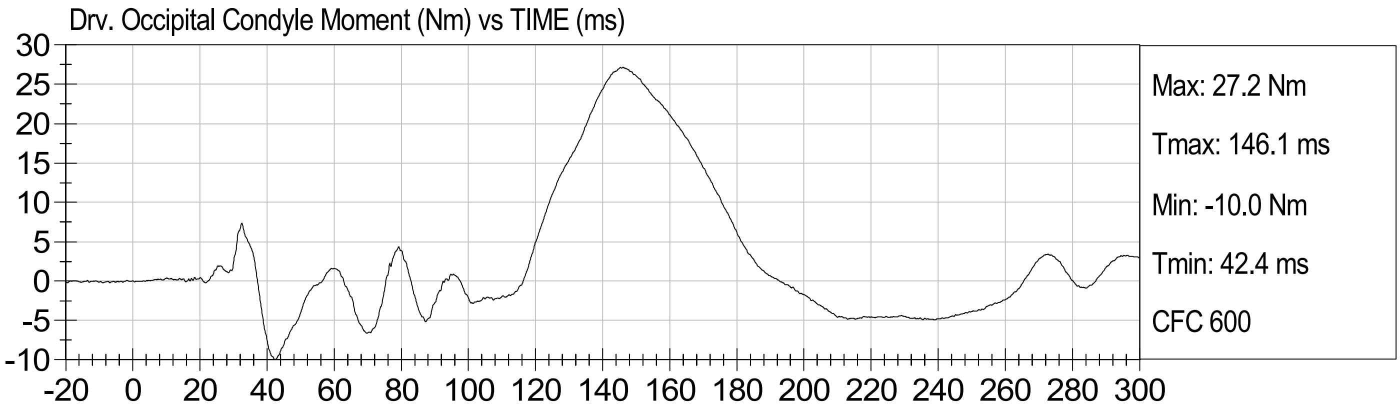
Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

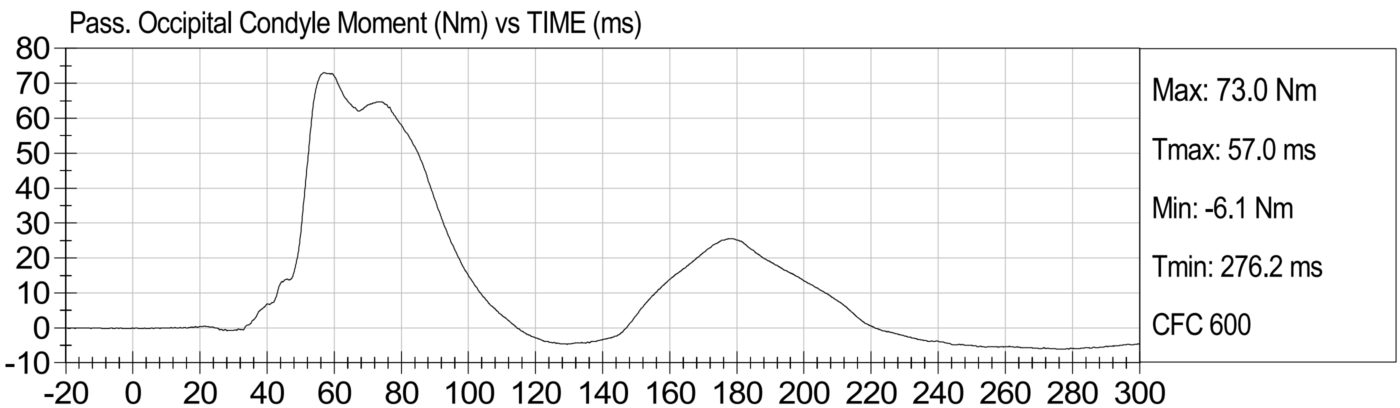








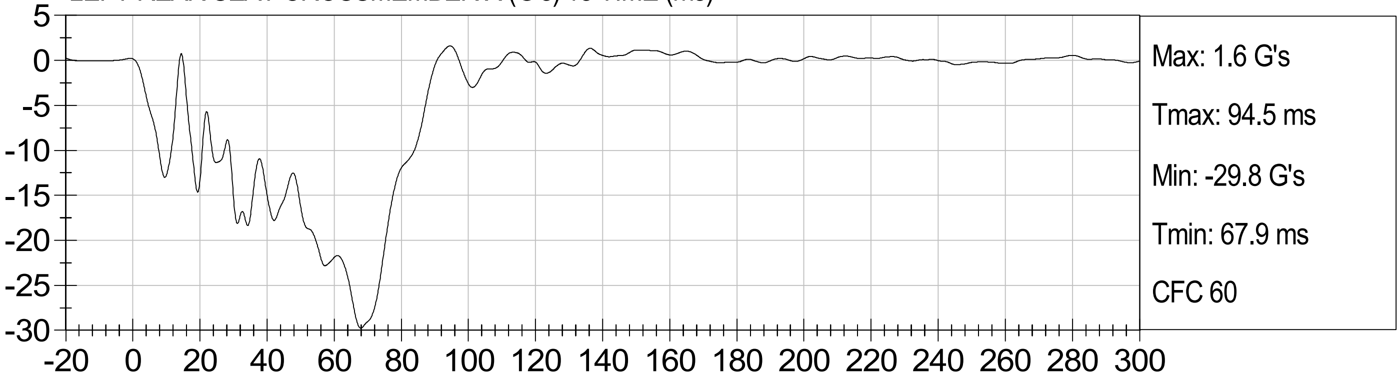

Drv. Occipital Condyle Moment (Nm) vs TIME (ms)
30
25
20
15
10
5
0
-5
-10
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 27.2 Nm
Tmax: 146.1 ms
Min: -10.0 Nm
Tmin: 42.4 ms
CFC 600


Pass. Occipital Condyle Moment (Nm) vs TIME (ms)
80
70
60
50
40
30
20
10
0
-10
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 73.0 Nm
Tmax: 57.0 ms
Min: -6.1 Nm
Tmin: 276.2 ms
CFC 600

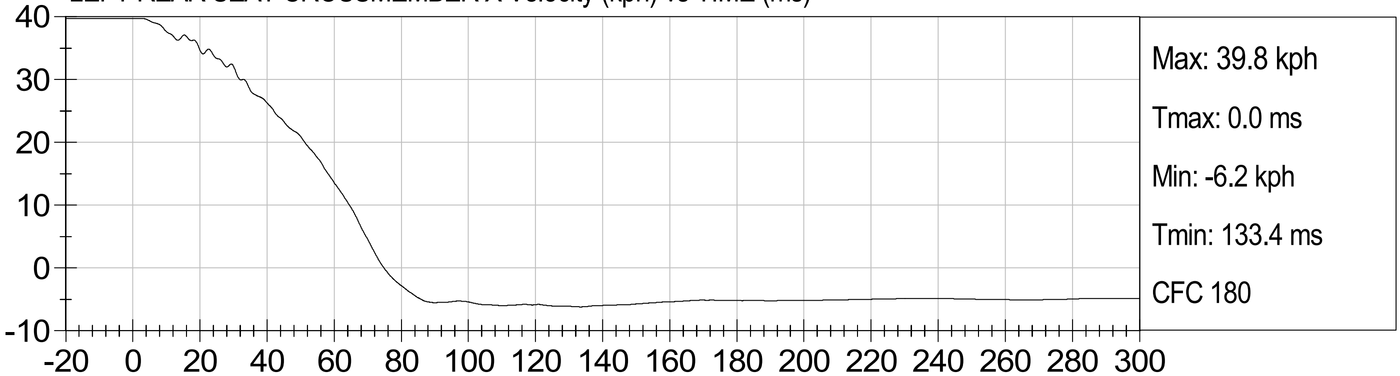
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

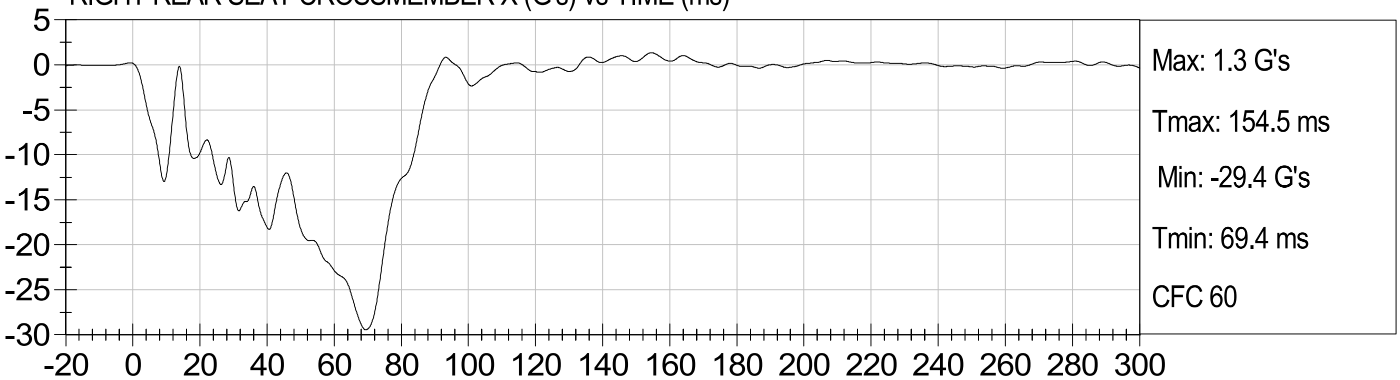
LEFT REAR SEAT CROSSMEMBER X (G's) vs TIME (ms)



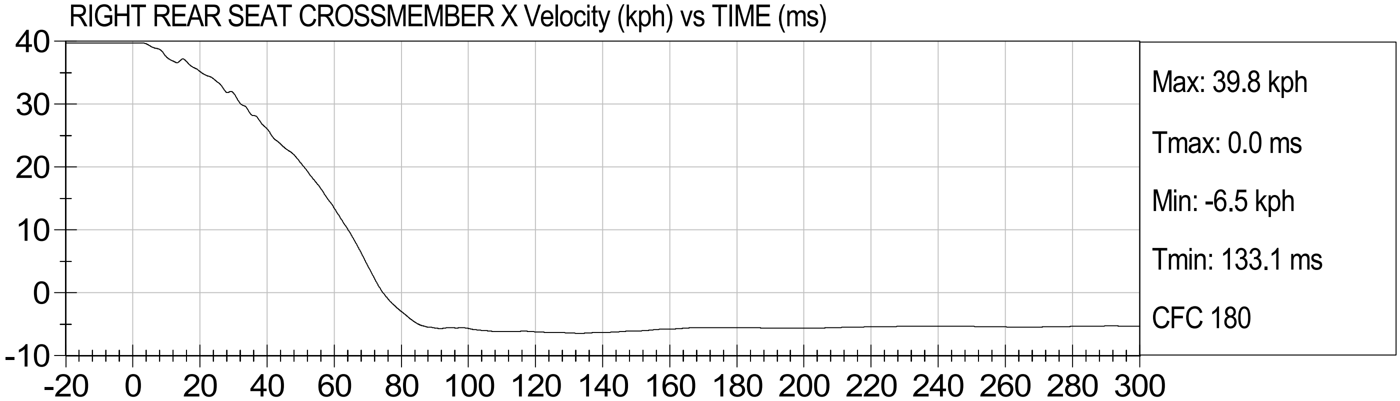
LEFT REAR SEAT CROSSMEMBER X Velocity (kph) vs TIME (ms)



RIGHT REAR SEAT CROSSMEMBER X (G's) vs TIME (ms)



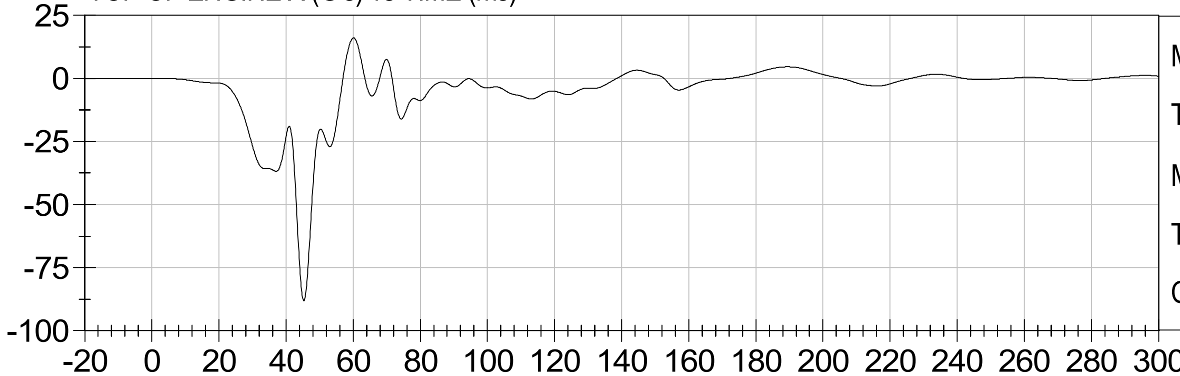
RIGHT REAR SEAT CROSSMEMBER X Velocity (kph) vs TIME (ms)



25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

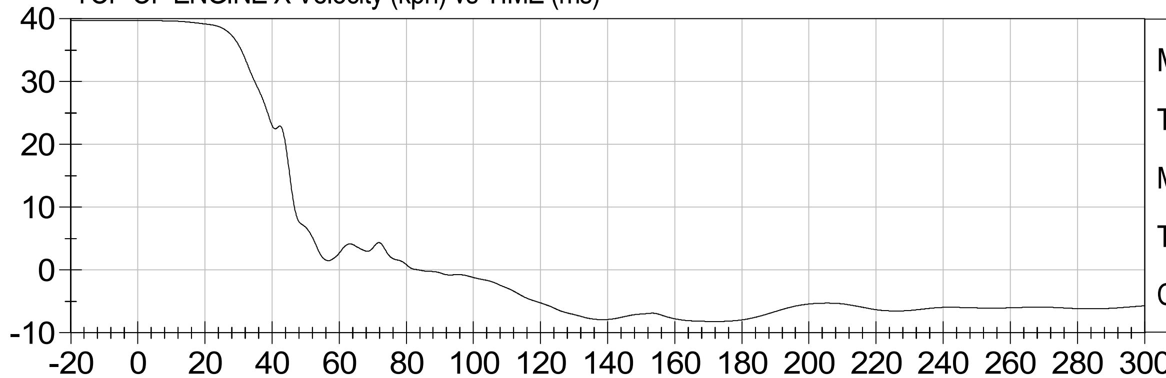
Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

TOP OF ENGINE X (G's) vs TIME (ms)



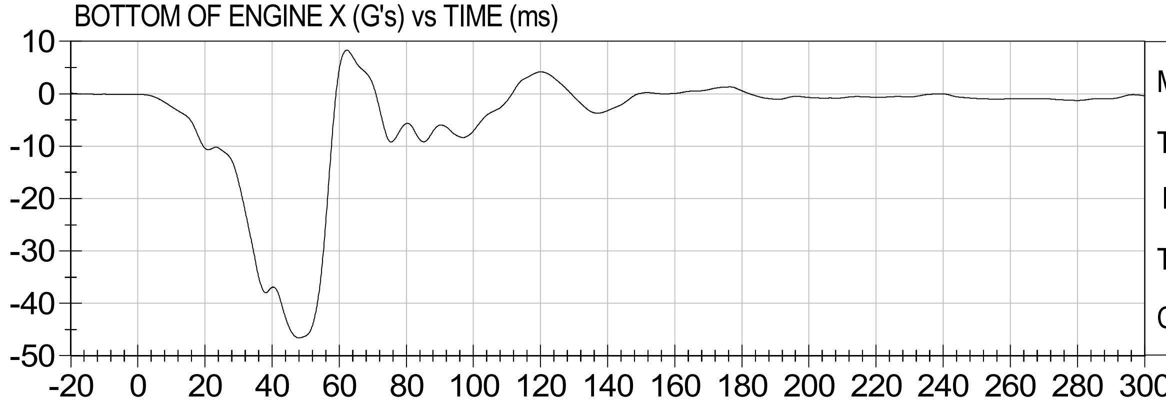
Max: 16.1 G's
Tmax: 60.1 ms
Min: -88.1 G's
Tmin: 45.3 ms
CFC 60

TOP OF ENGINE X Velocity (kph) vs TIME (ms)



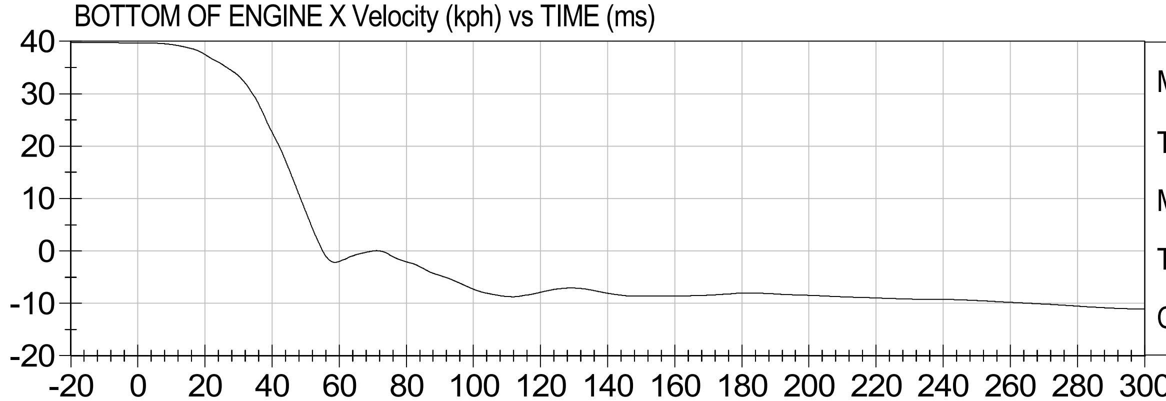
Max: 39.8 kph
Tmax: 0.0 ms
Min: -8.2 kph
Tmin: 172.3 ms
CFC 180

BOTTOM OF ENGINE X (G's) vs TIME (ms)



Max: 8.3 G's
Tmax: 62.3 ms
Min: -46.6 G's
Tmin: 47.9 ms
CFC 60

BOTTOM OF ENGINE X Velocity (kph) vs TIME (ms)

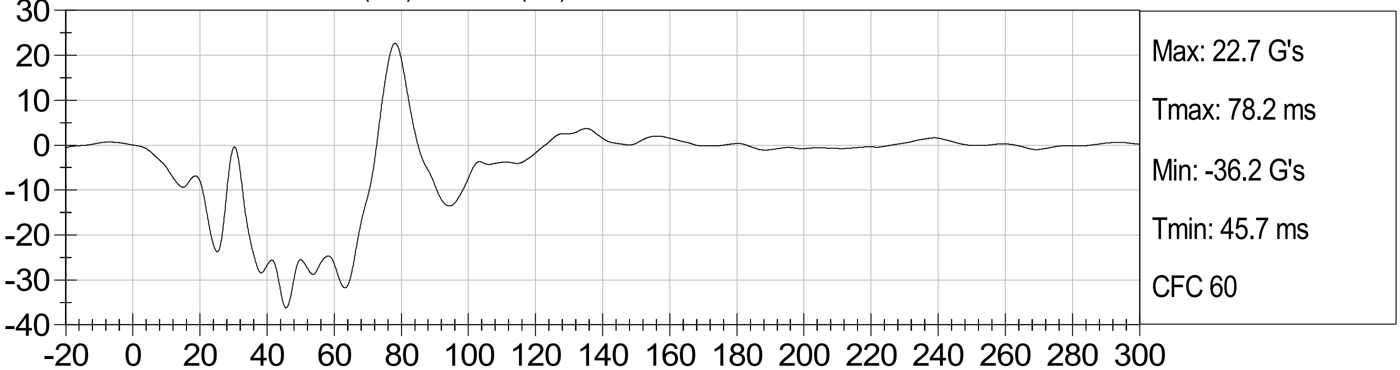


Max: 39.8 kph
Tmax: 0.0 ms
Min: -11.1 kph
Tmin: 300.0 ms
CFC 180

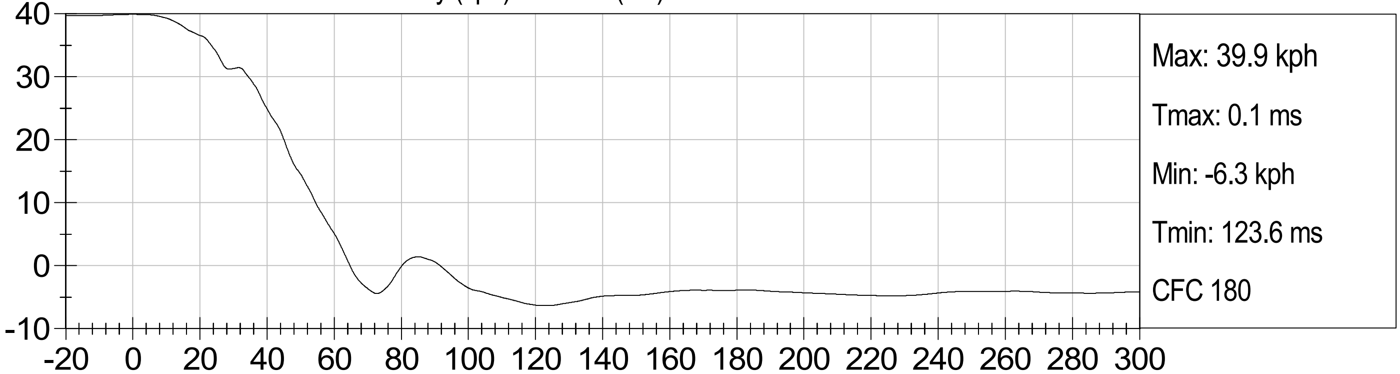
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

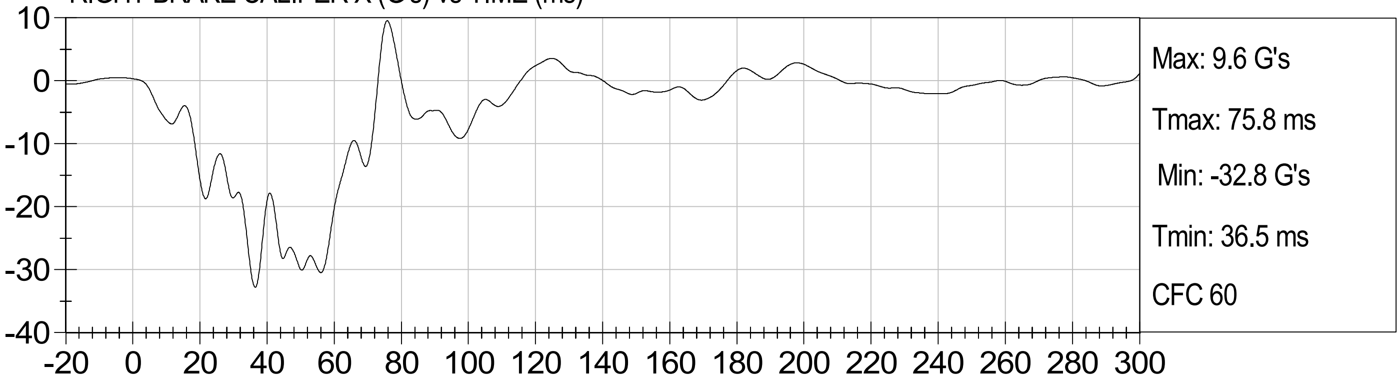
LEFT BRAKE CALIPER X (G's) vs TIME (ms)



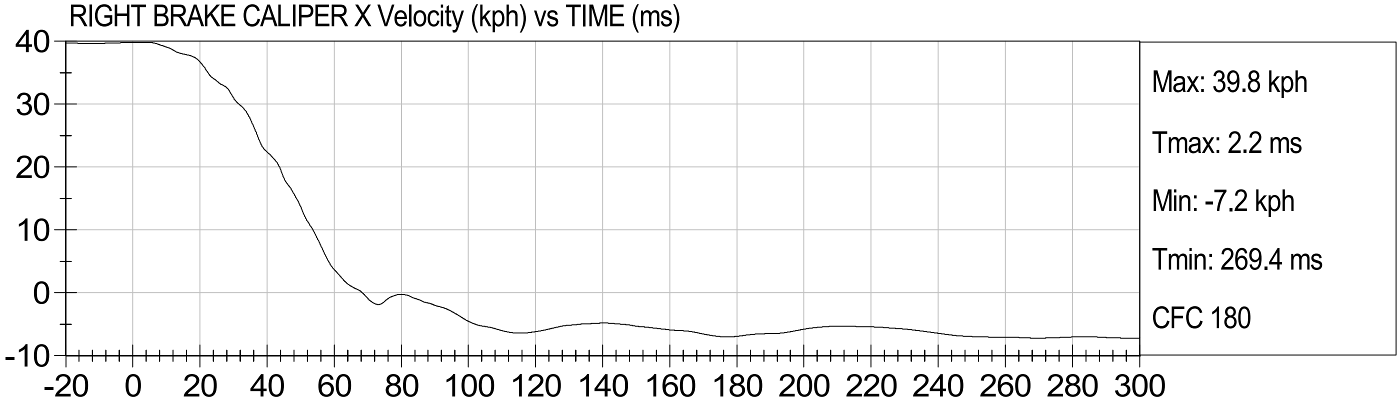
LEFT BRAKE CALIPER X Velocity (kph) vs TIME (ms)



RIGHT BRAKE CALIPER X (G's) vs TIME (ms)



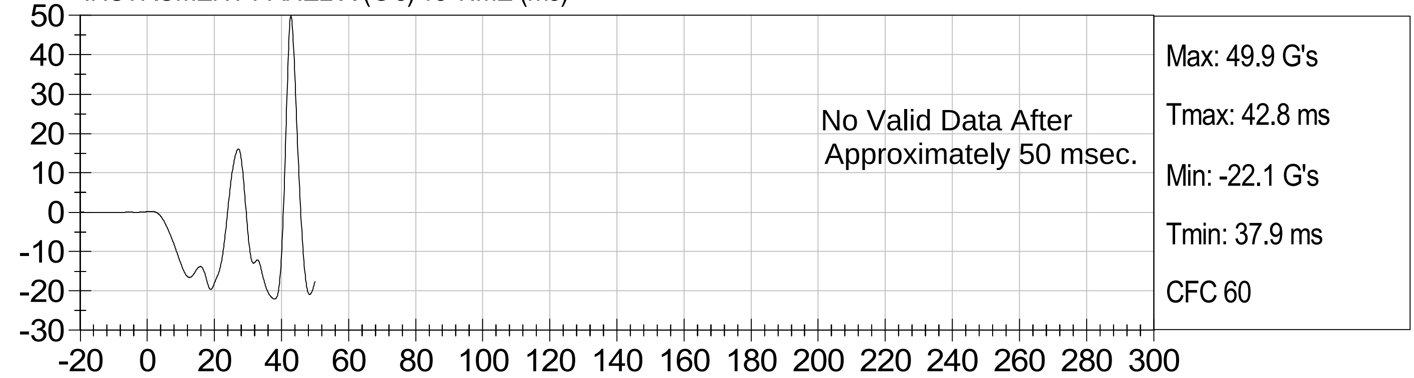
RIGHT BRAKE CALIPER X Velocity (kph) vs TIME (ms)



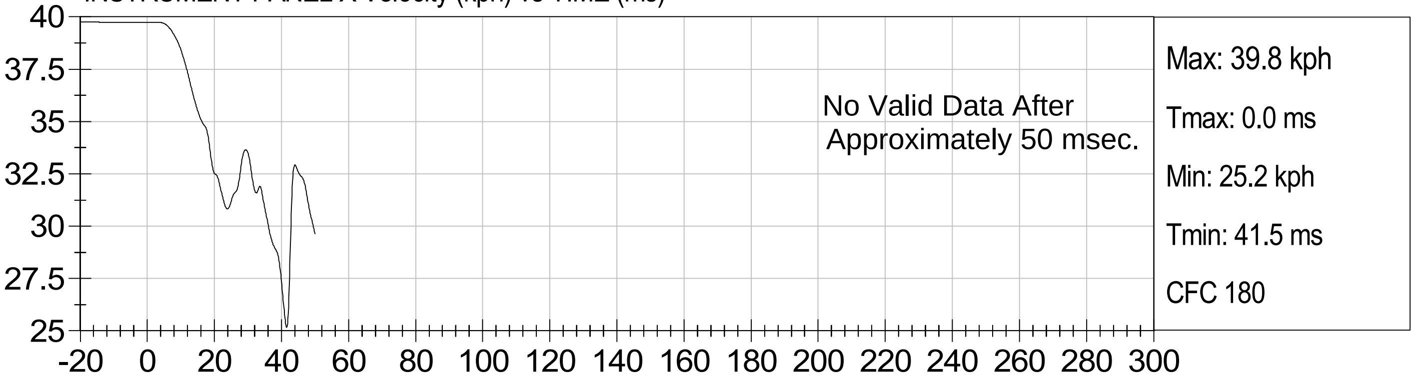
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

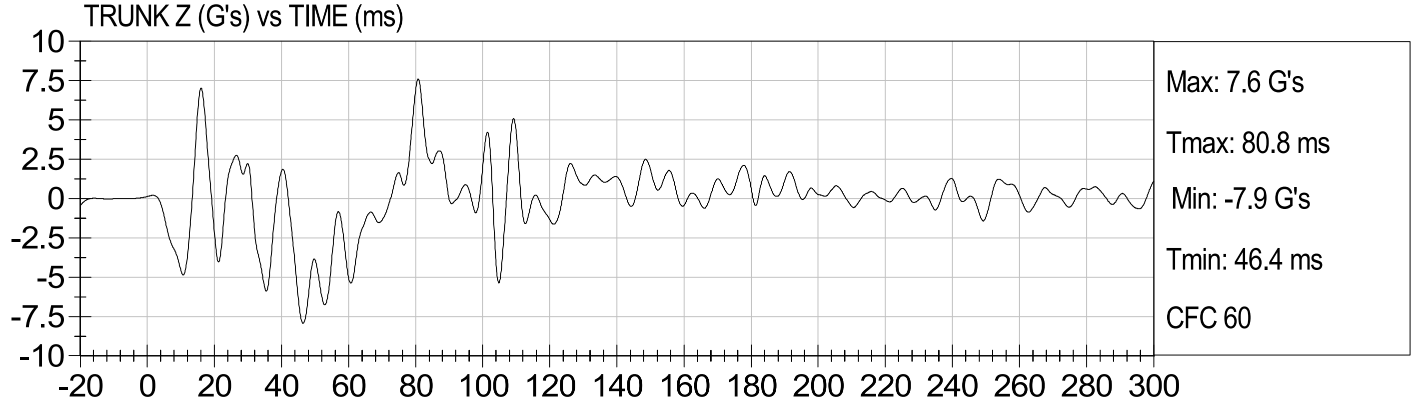
INSTRUMENT PANEL X (G's) vs TIME (ms)



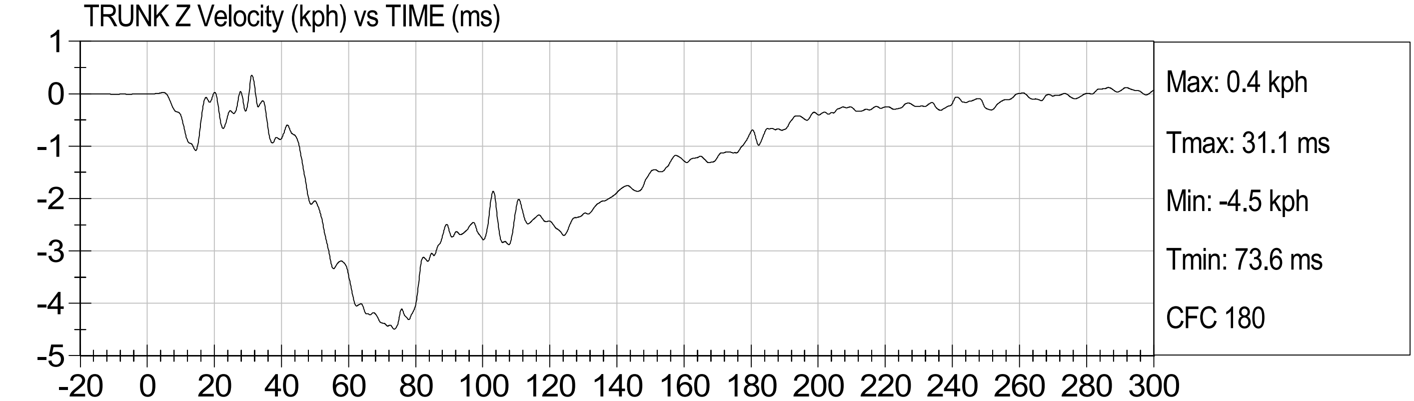
INSTRUMENT PANEL X Velocity (kph) vs TIME (ms)



TRUNK Z (G's) vs TIME (ms)



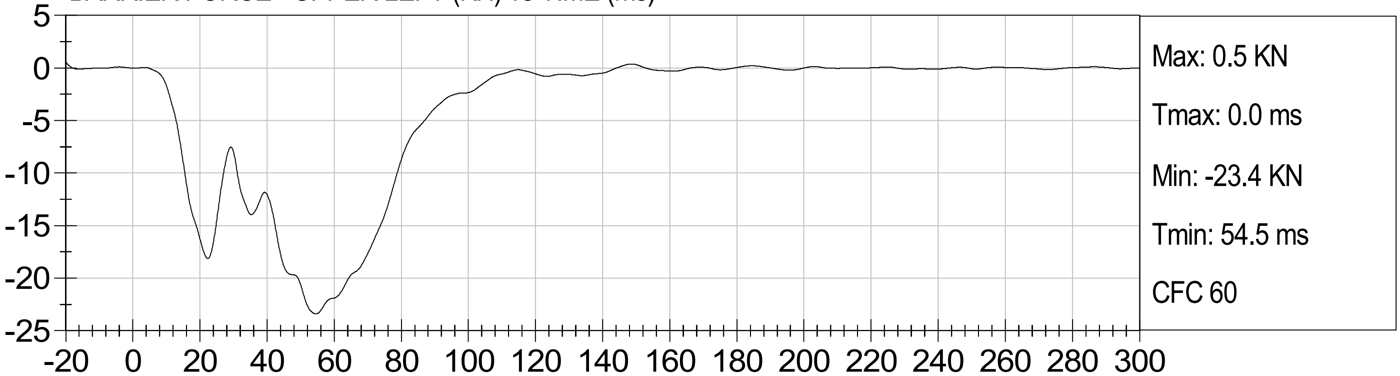
TRUNK Z Velocity (kph) vs TIME (ms)



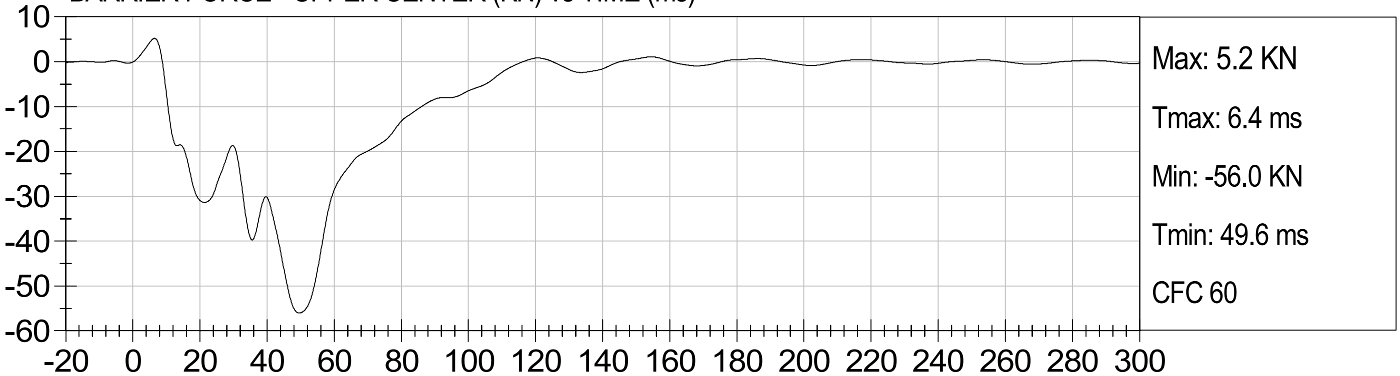
25 MPH FRONTAL UNBELTED
2006 MERCEDES E350 (C60503)

Test Date: 07/18/2006
Speed: 24.7 mph (39.8 km/h)

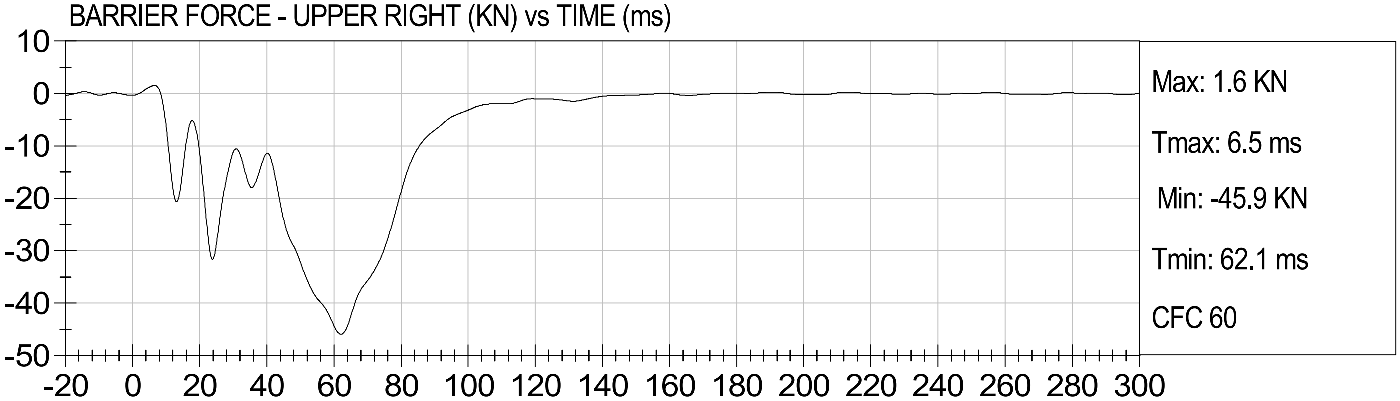
BARRIER FORCE - UPPER LEFT (KN) vs TIME (ms)

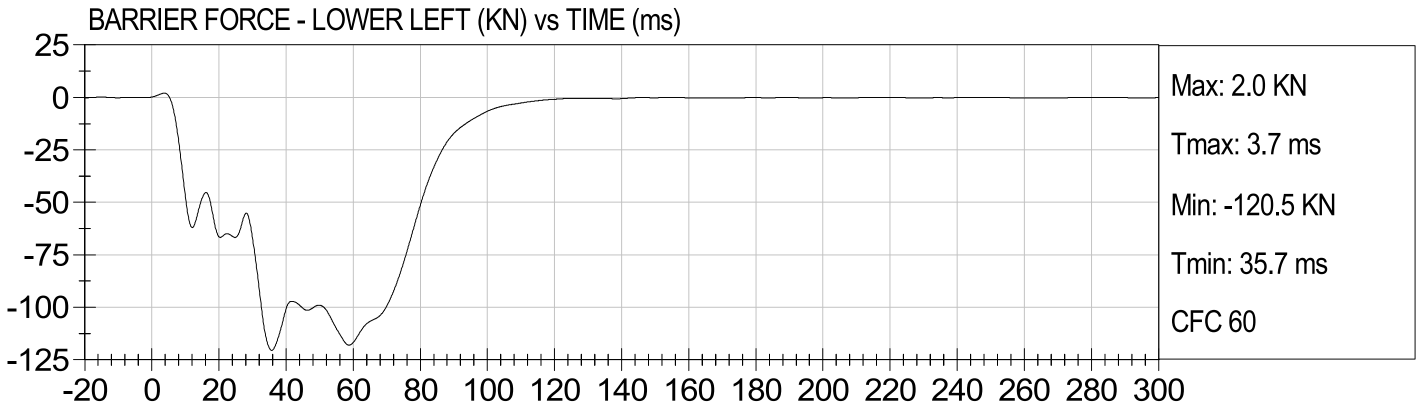


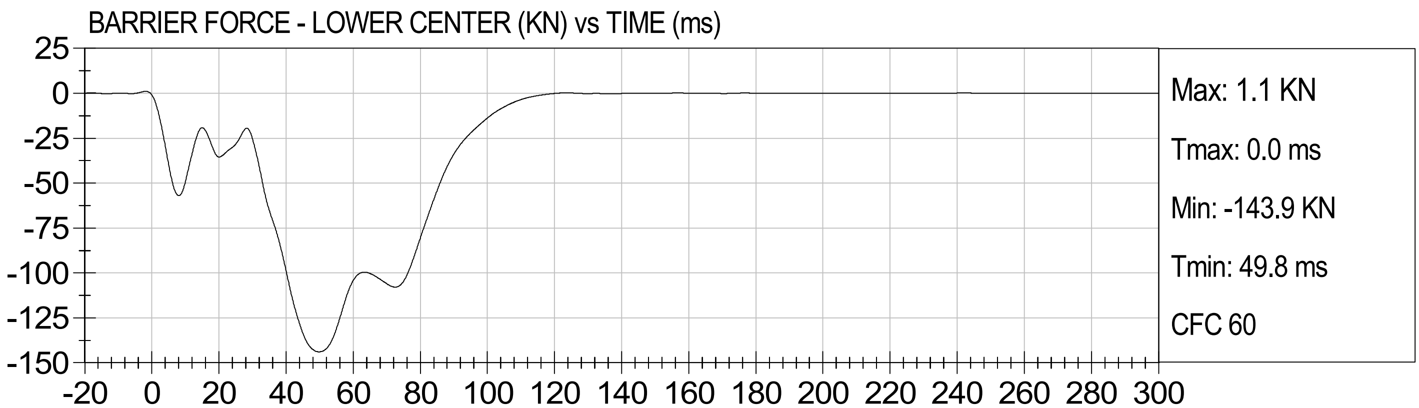
BARRIER FORCE - UPPER CENTER (KN) vs TIME (ms)

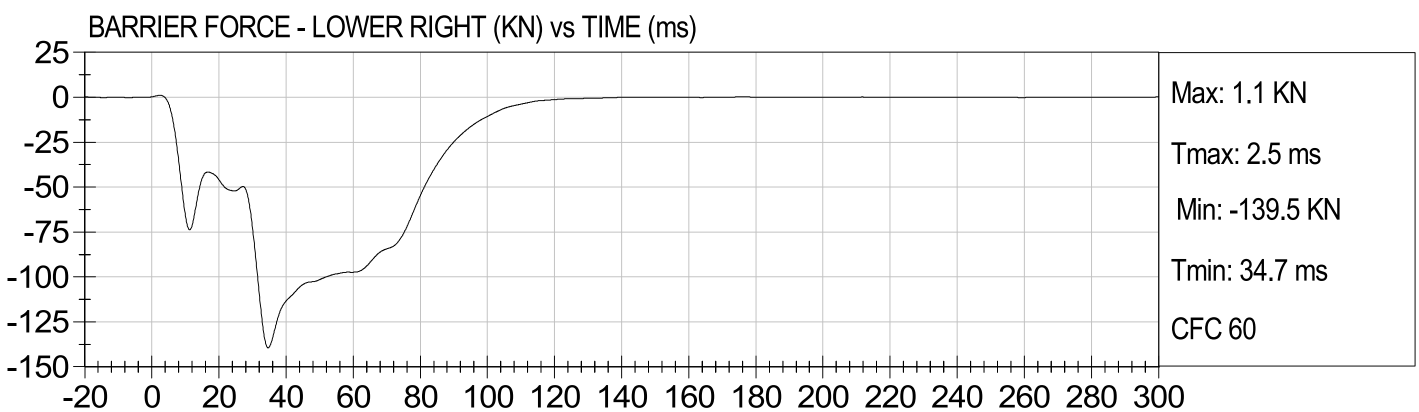


BARRIER FORCE - UPPER RIGHT (KN) vs TIME (ms)

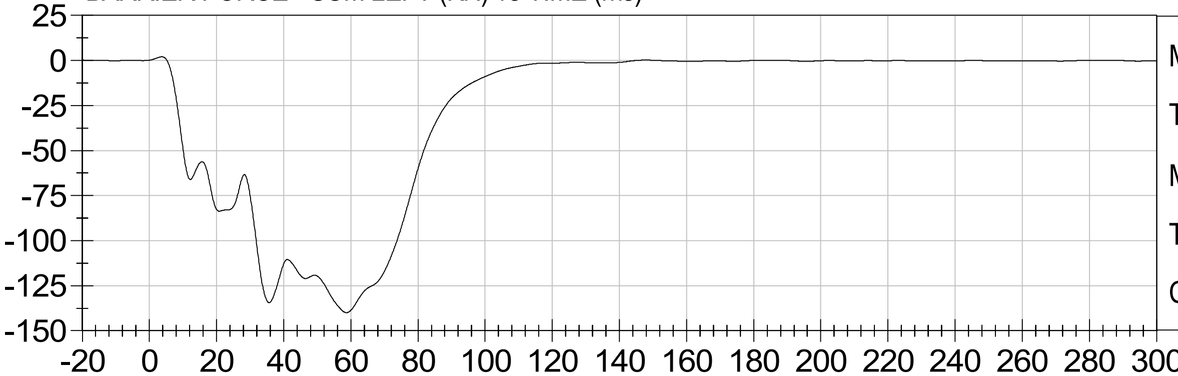



BARRIER FORCE - LOWER LEFT (KN) vs TIME (ms)
25
0
-25
-50
-75
-100
-125
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 2.0 KN
Tmax: 3.7 ms
Min: -120.5 KN
Tmin: 35.7 ms
CFC 60


BARRIER FORCE - LOWER CENTER (KN) vs TIME (ms)
25
0
-25
-50
-75
-100
-125
-150
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 1.1 KN
Tmax: 0.0 ms
Min: -143.9 KN
Tmin: 49.8 ms
CFC 60


BARRIER FORCE - LOWER RIGHT (KN) vs TIME (ms)
25
0
-25
-50
-75
-100
-125
-150
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 1.1 KN
Tmax: 2.5 ms
Min: -139.5 KN
Tmin: 34.7 ms
CFC 60

BARRIER FORCE - SUM LEFT (KN) vs TIME (ms)



Max: 2.1 KN

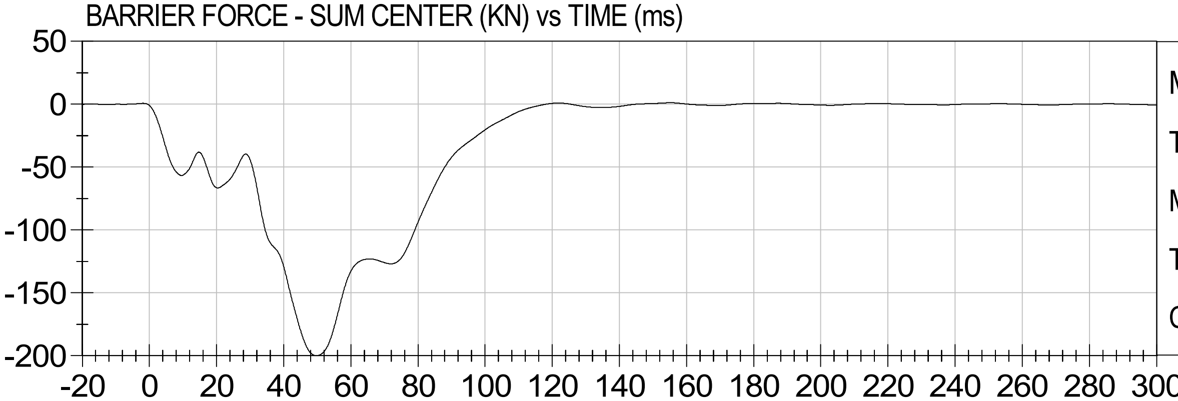
Tmax: 3.7 ms

Min: -140.0 KN

Tmin: 58.7 ms

CFC 60

BARRIER FORCE - SUM CENTER (KN) vs TIME (ms)



Max: 1.2 KN

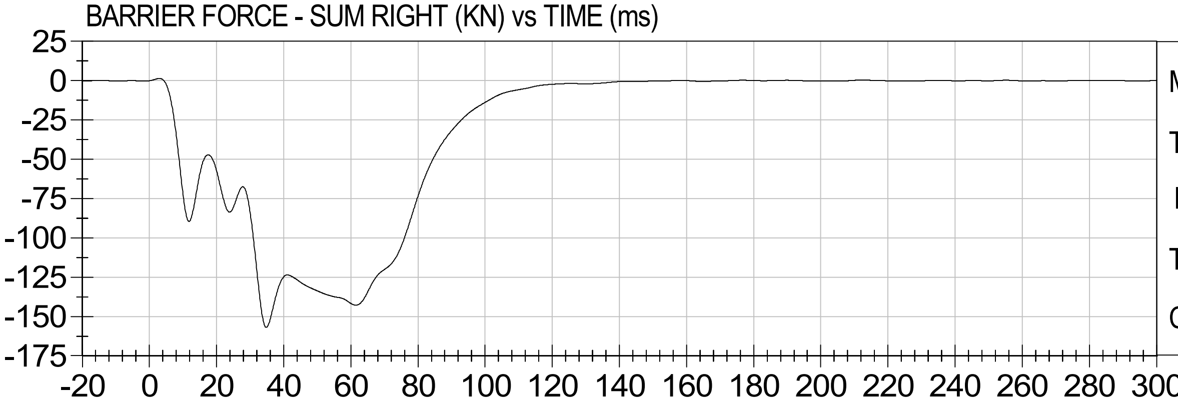
Tmax: 155.2 ms

Min: -199.9 KN

Tmin: 49.7 ms

CFC 60

BARRIER FORCE - SUM RIGHT (KN) vs TIME (ms)



Max: 1.4 KN

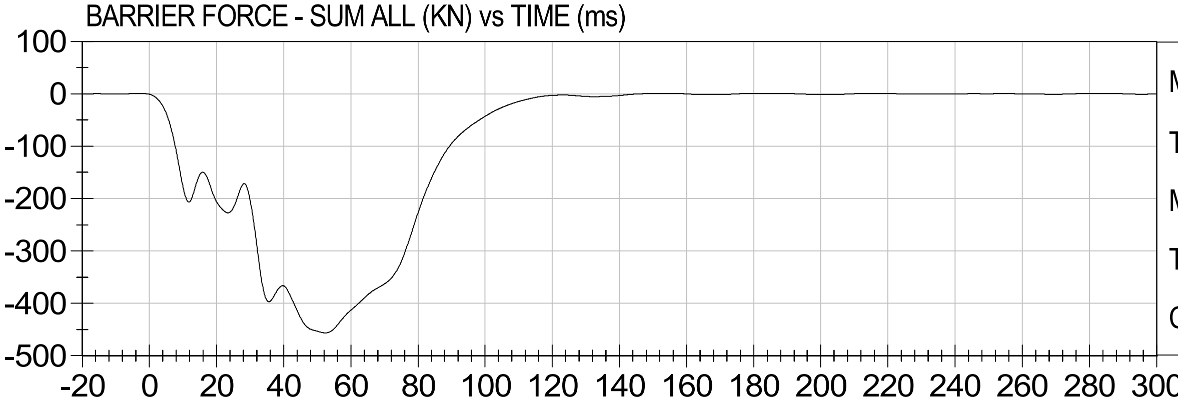
Tmax: 3.0 ms

Min: -156.9 KN

Tmin: 34.8 ms

CFC 60

BARRIER FORCE - SUM ALL (KN) vs TIME (ms)



Max: 1.0 KN

Tmax: 188.1 ms

Min: -456.3 KN

Tmin: 52.4 ms

CFC 60

APPENDIX B

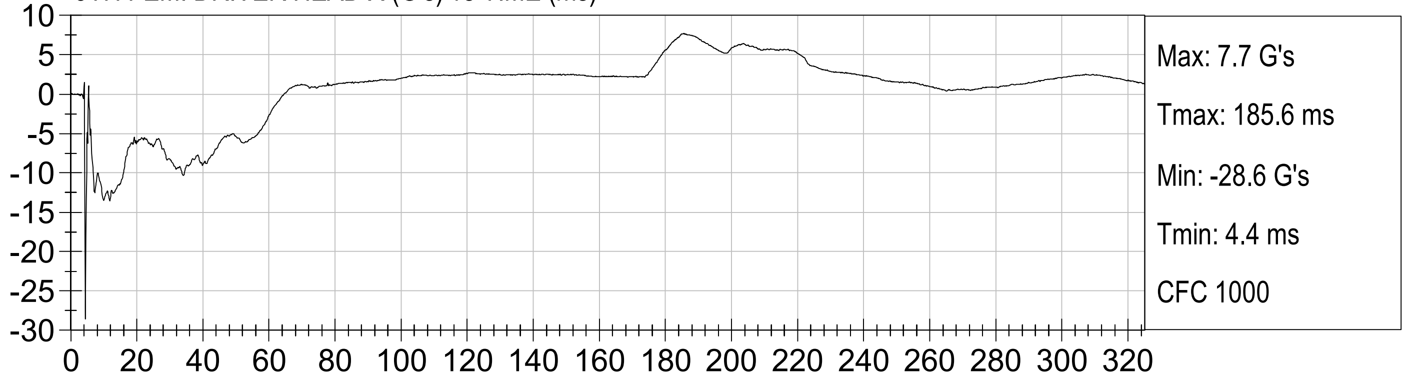
LOW RISK TEST DATA

TABLE OF DATA PLOTS

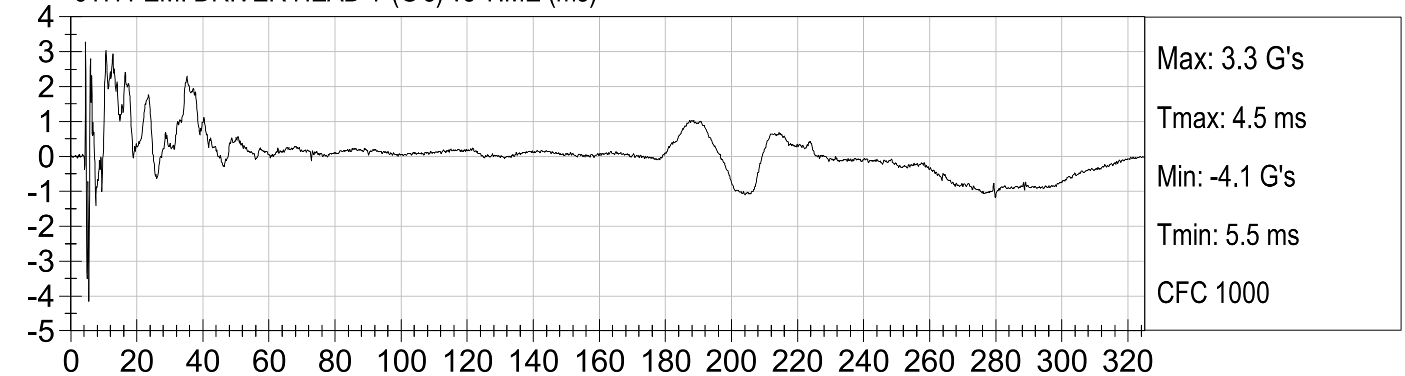
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

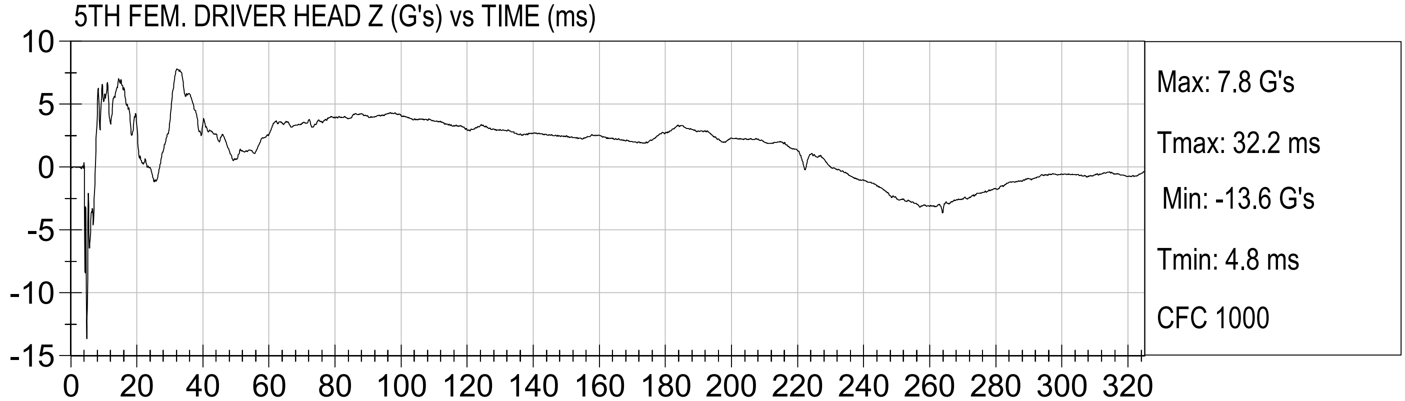
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



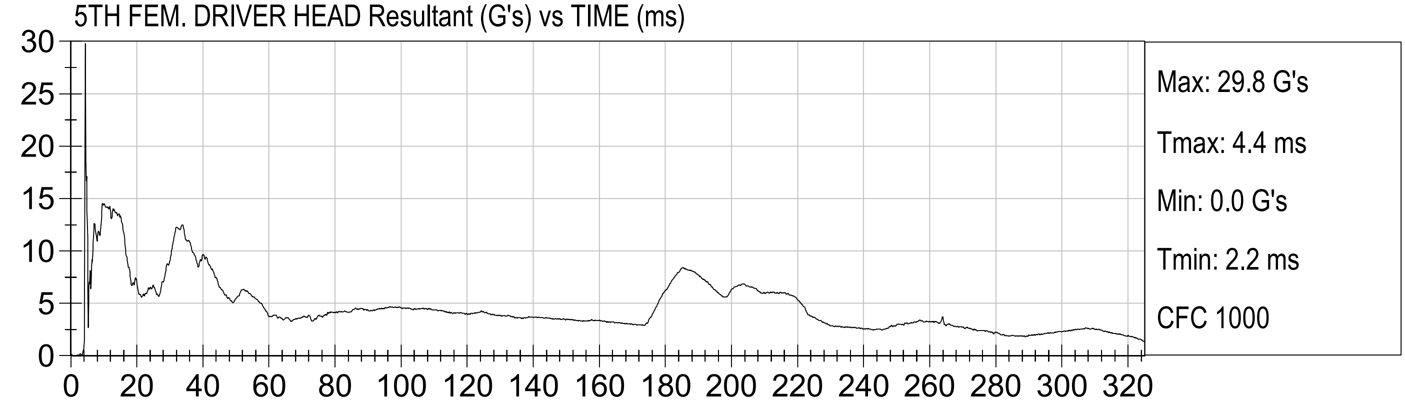
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



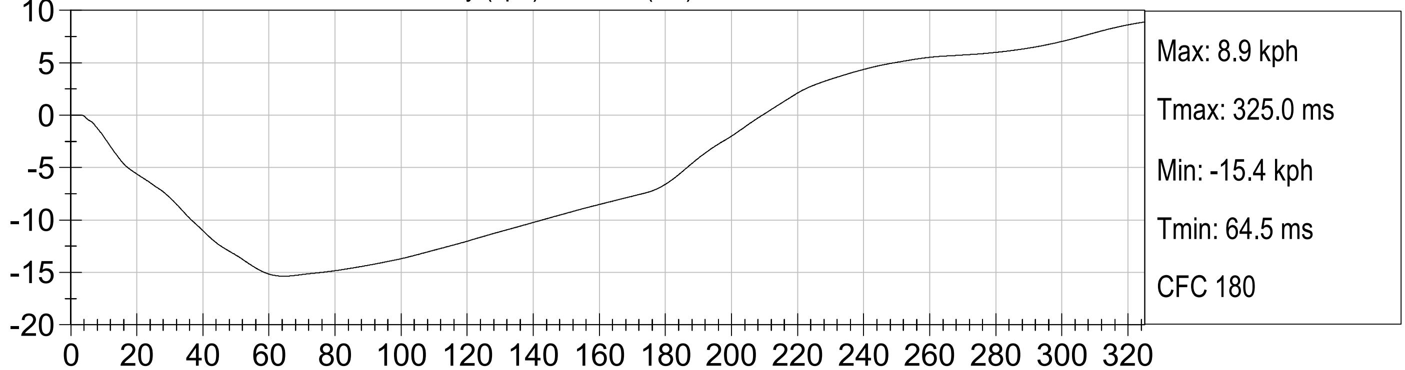
5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



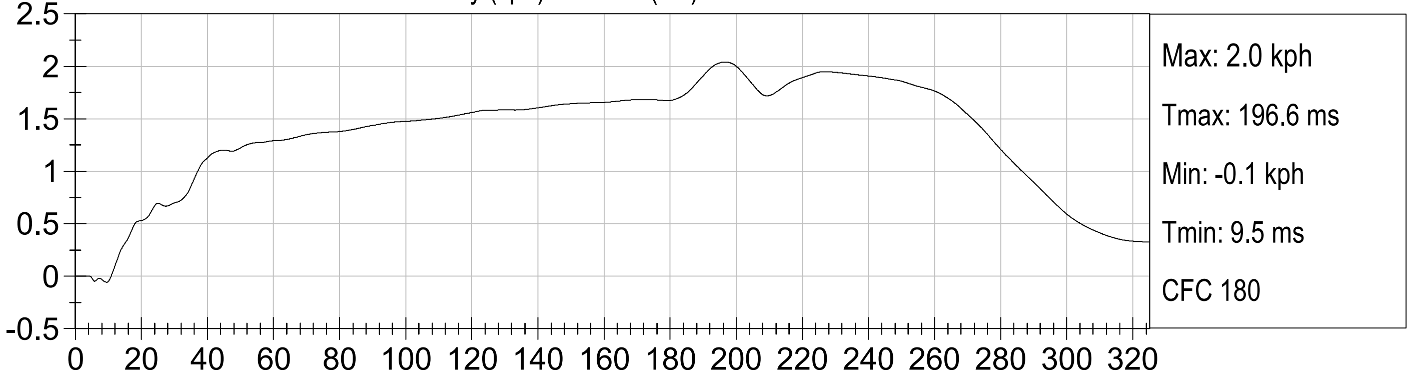
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)



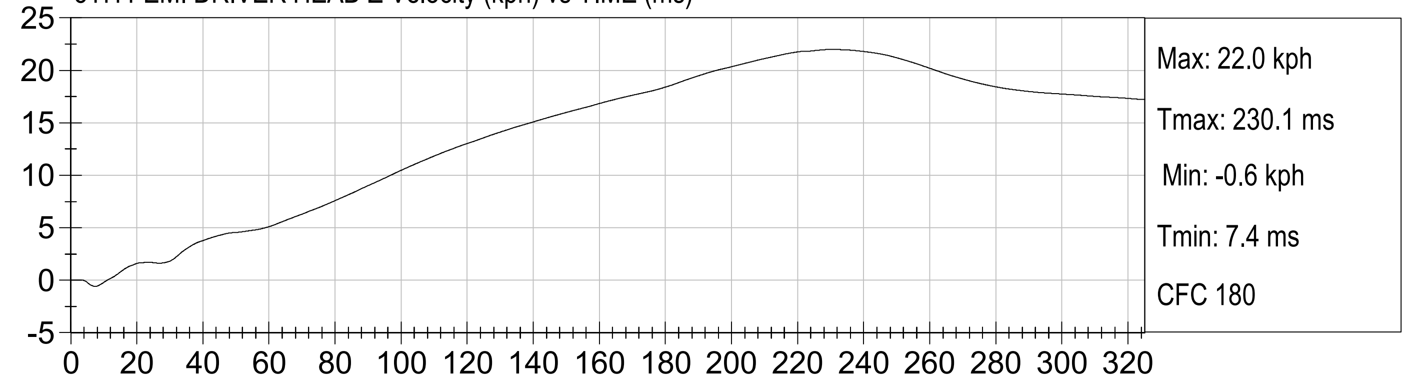
5TH FEM. DRIVER HEAD X Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER HEAD Y Velocity (kph) vs TIME (ms)



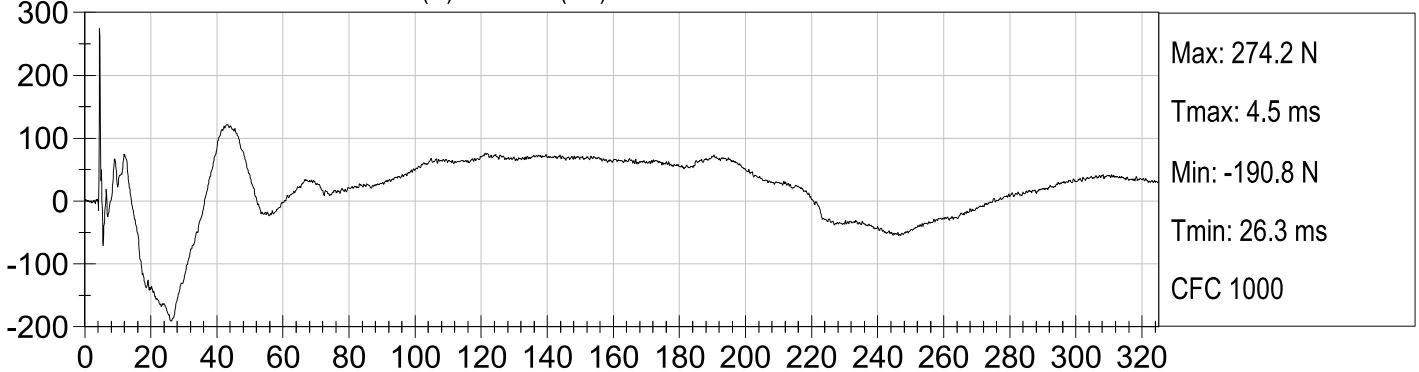
5TH FEM. DRIVER HEAD Z Velocity (kph) vs TIME (ms)



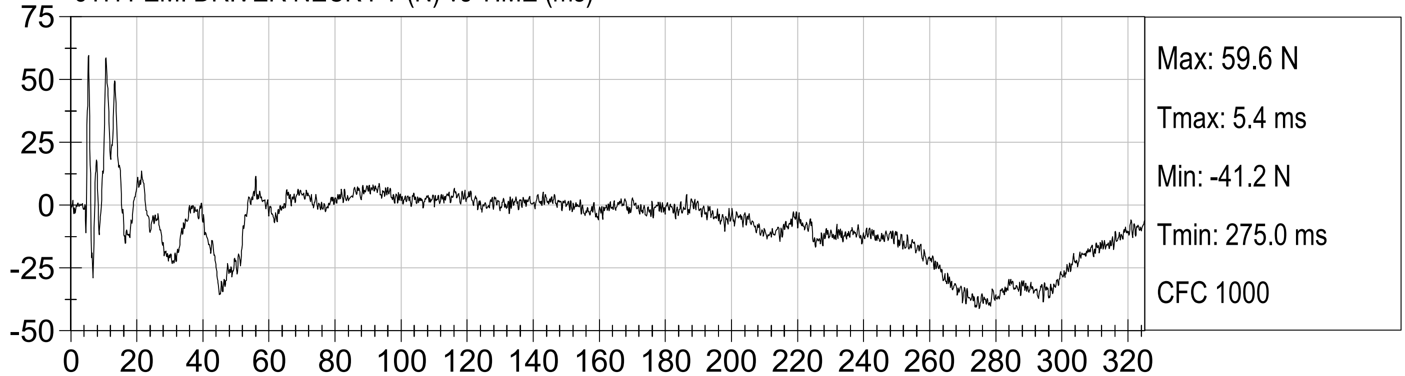
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

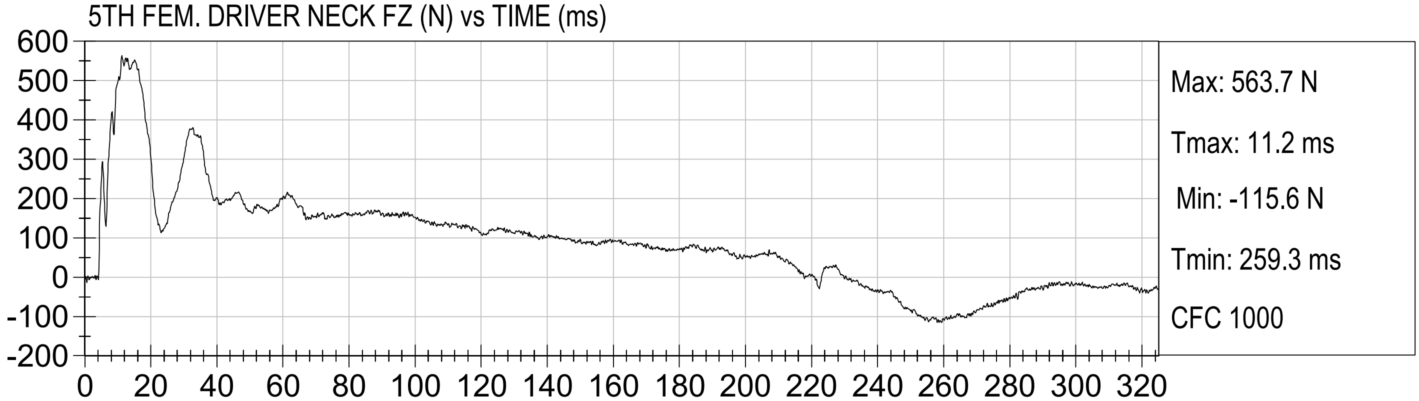
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



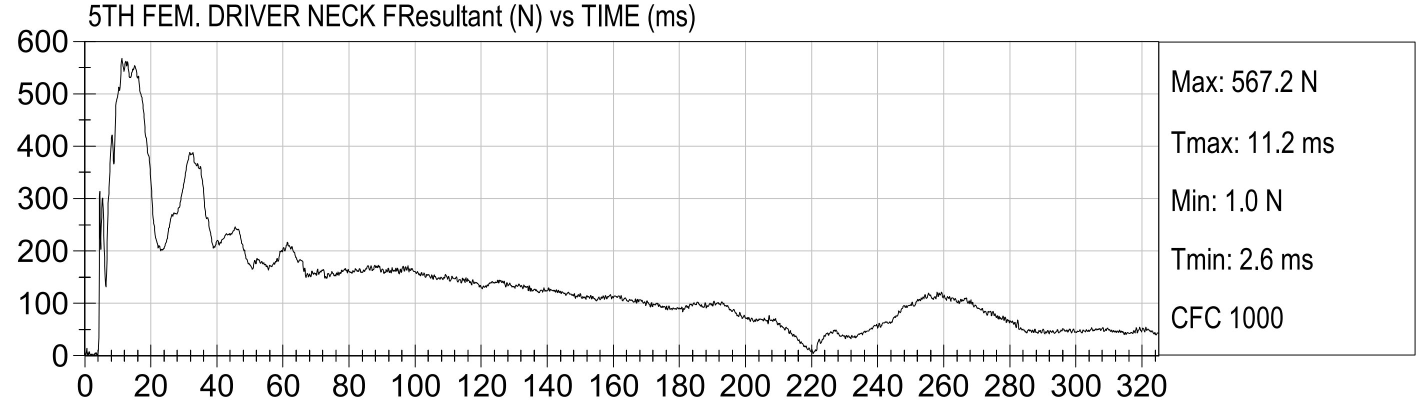
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



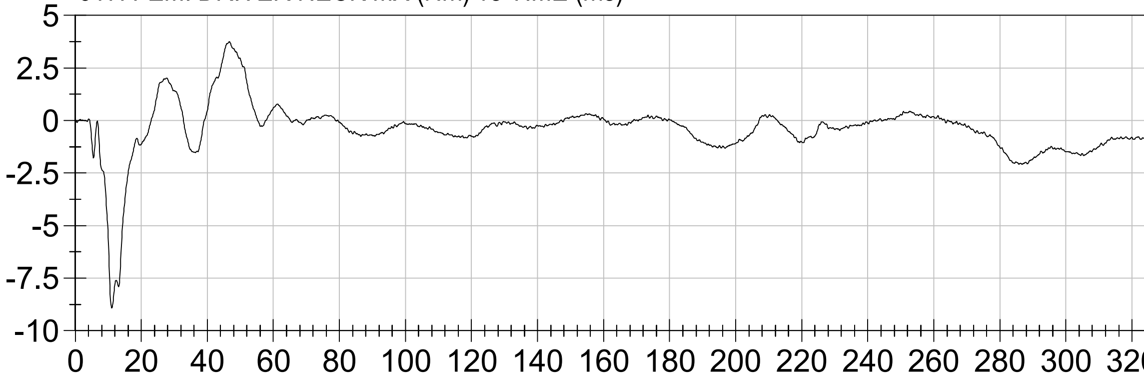
5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

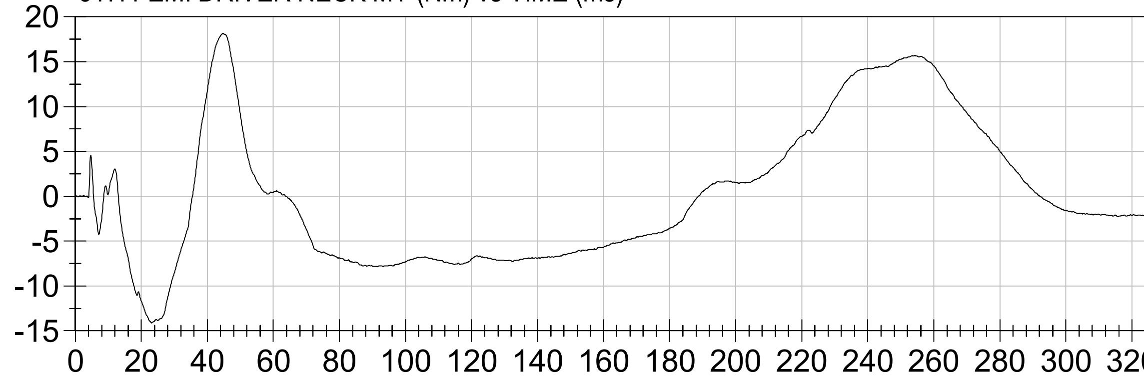


5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



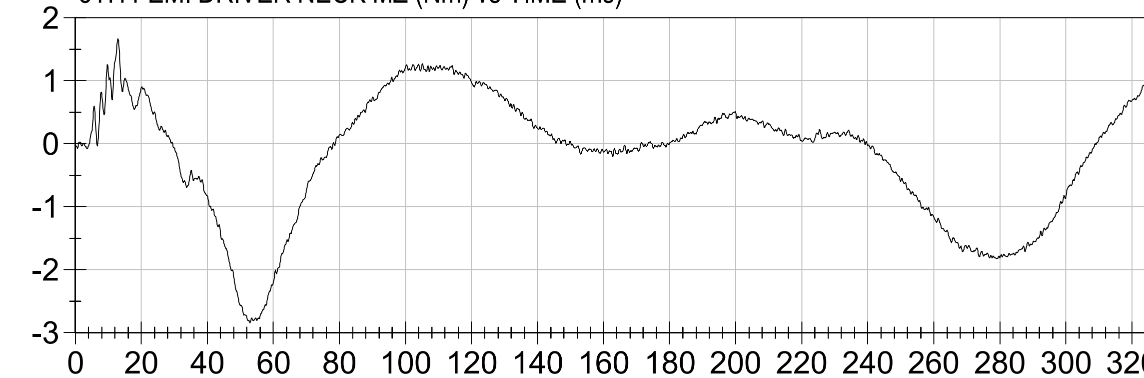
Max: 3.8 Nm
Tmax: 46.6 ms
Min: -8.9 Nm
Tmin: 11.0 ms
CFC 600

5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



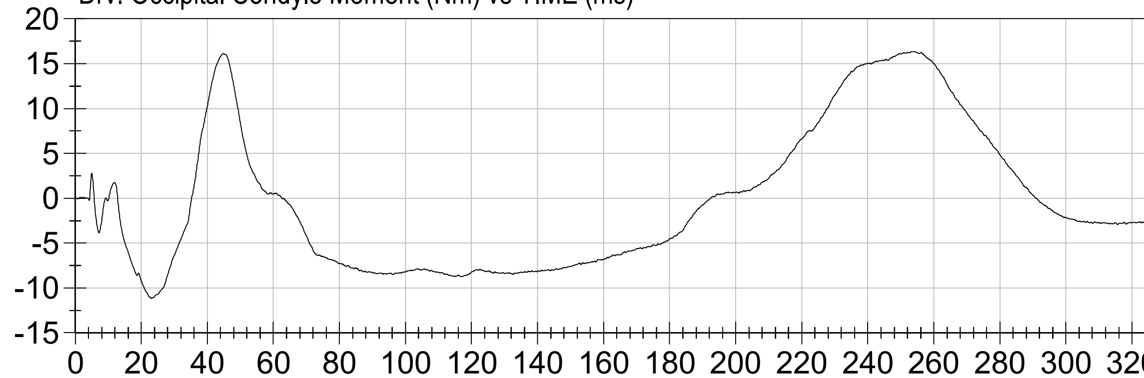
Max: 18.2 Nm
Tmax: 44.7 ms
Min: -14.1 Nm
Tmin: 23.1 ms
CFC 600

5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Max: 1.7 Nm
Tmax: 12.9 ms
Min: -2.8 Nm
Tmin: 52.9 ms
CFC 600

Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

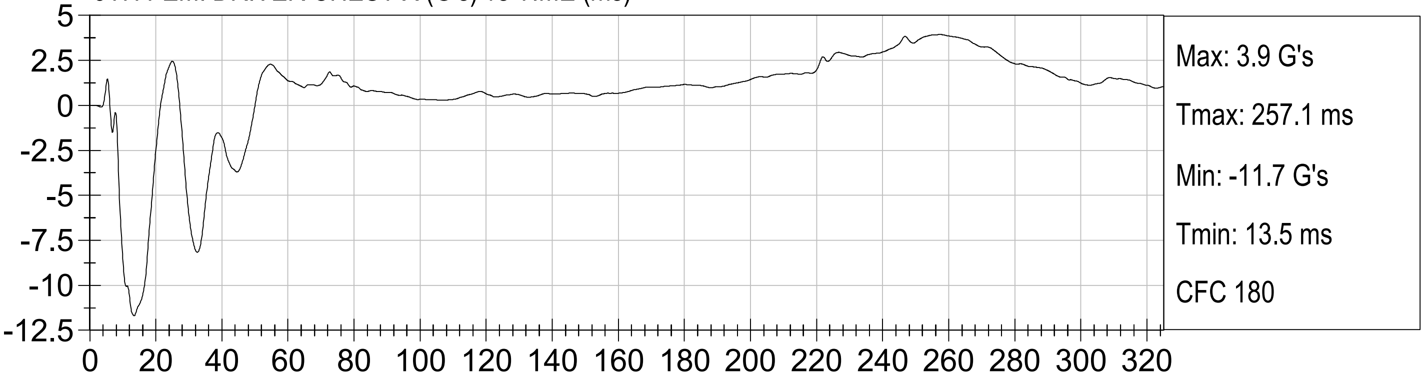


Max: 16.3 Nm
Tmax: 253.6 ms
Min: -11.2 Nm
Tmin: 23.1 ms
CFC 600

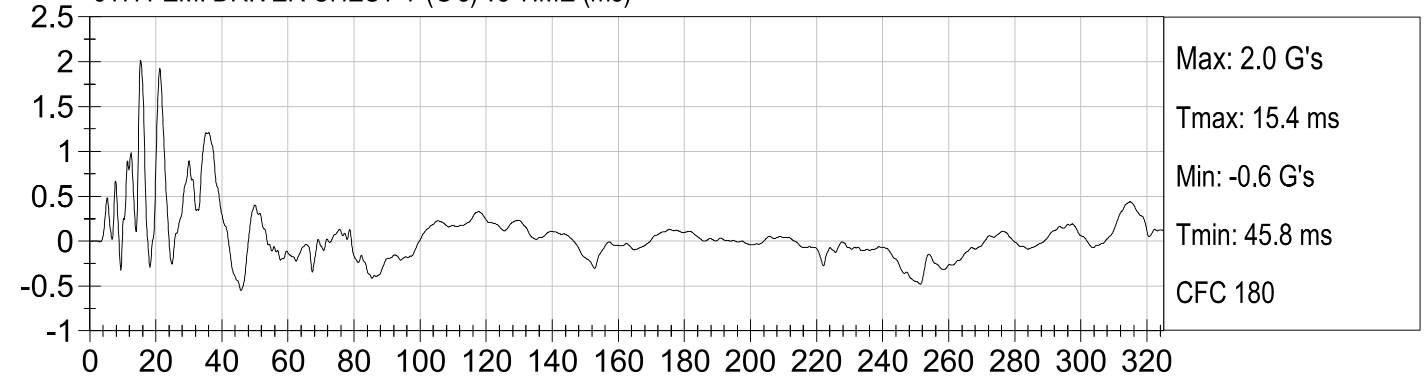
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

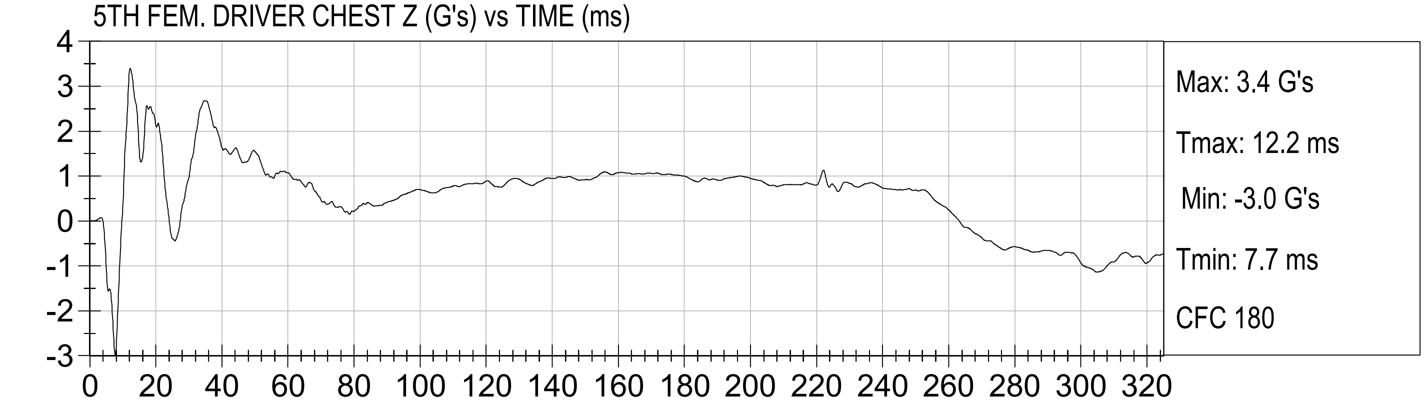
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



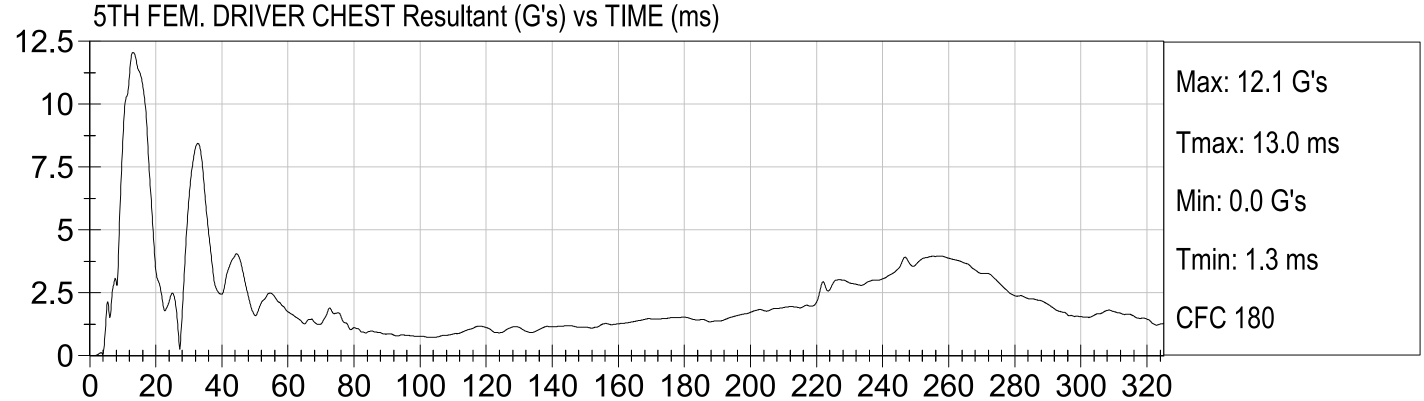
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



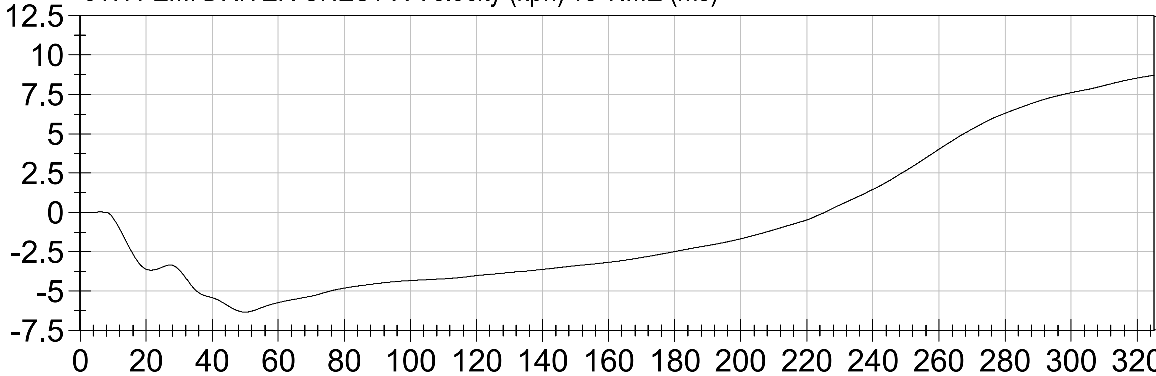
5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)



LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

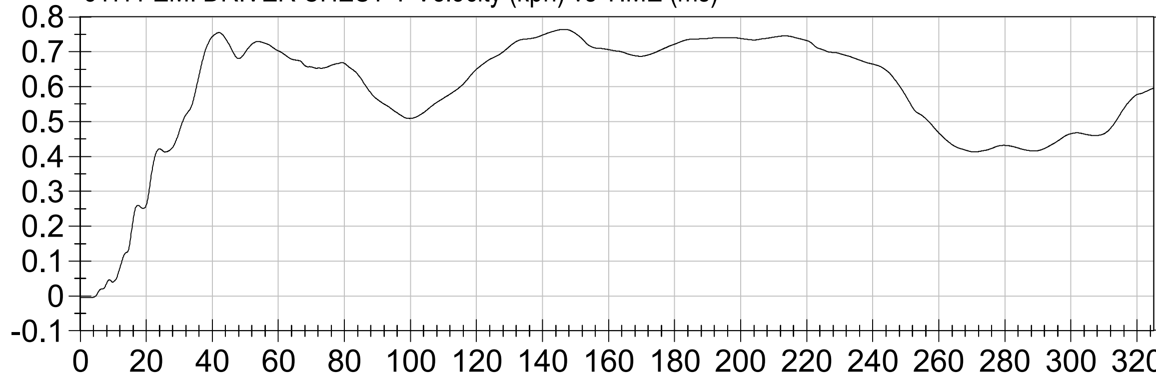
Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



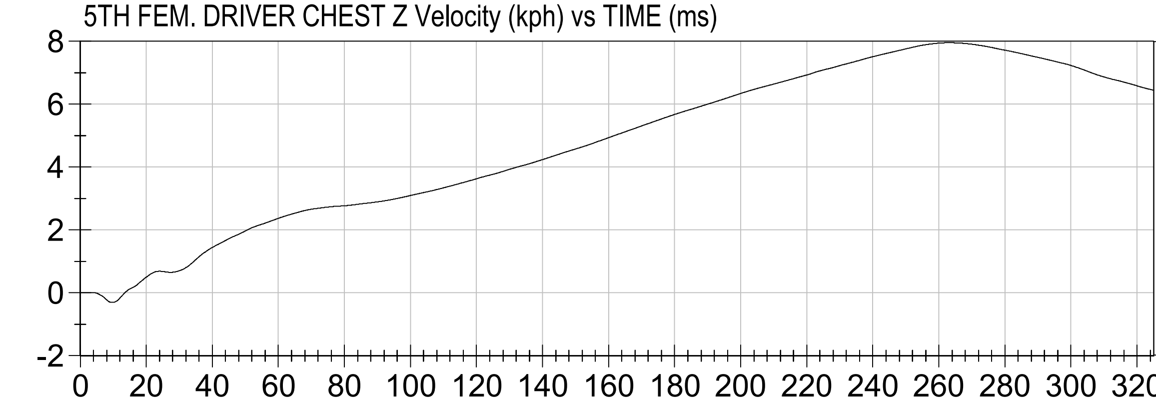
Max: 8.7 kph
Tmax: 325.0 ms
Min: -6.3 kph
Tmin: 50.0 ms
CFC 180

5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



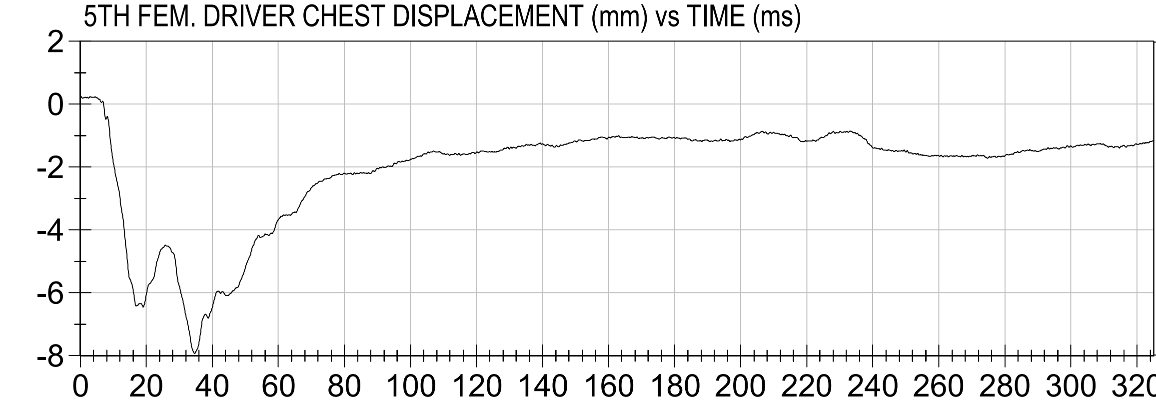
Max: 0.8 kph
Tmax: 146.5 ms
Min: -0.0 kph
Tmin: 3.4 ms
CFC 180

5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



Max: 8.0 kph
Tmax: 263.2 ms
Min: -0.3 kph
Tmin: 9.7 ms
CFC 180

5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

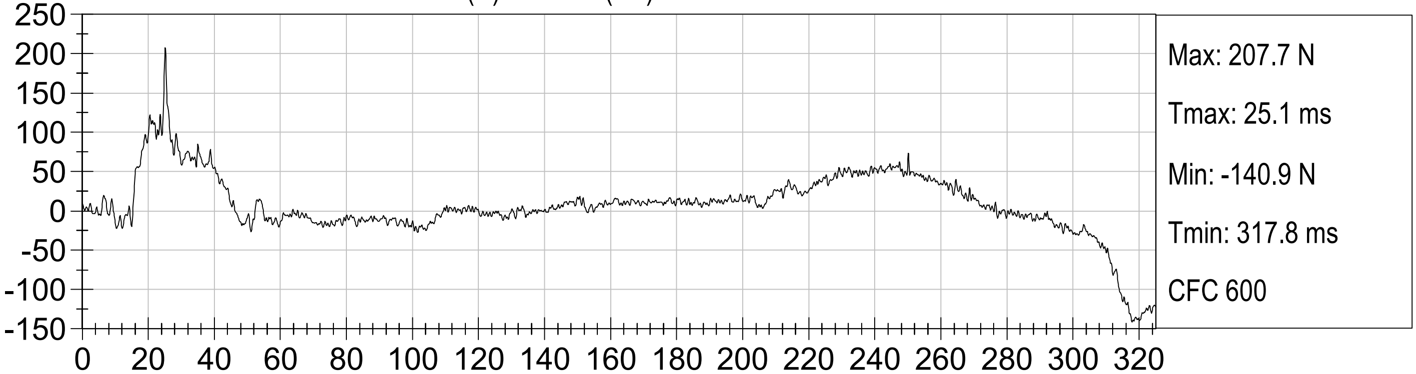


Max: 0.3 mm
Tmax: 0.1 ms
Min: -7.9 mm
Tmin: 34.6 ms
CFC 600

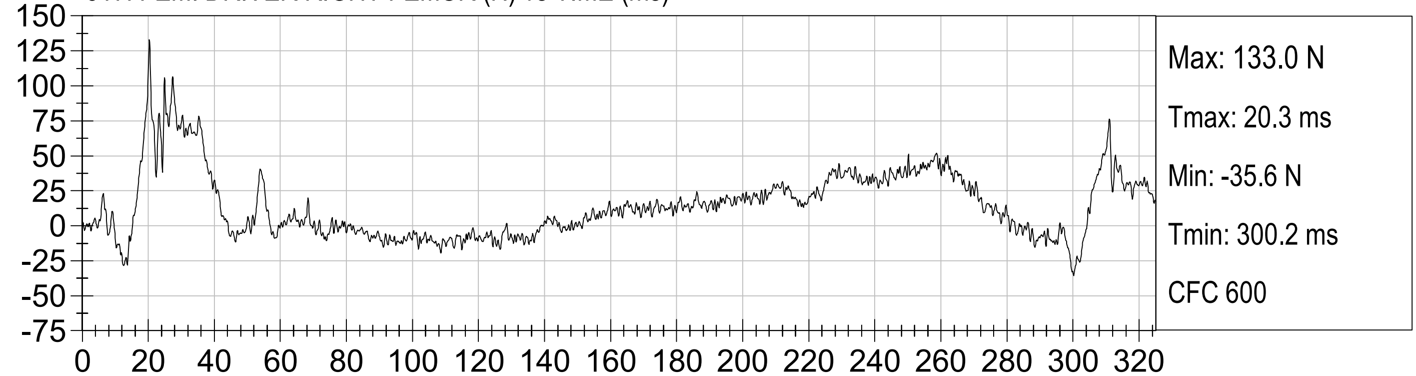
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

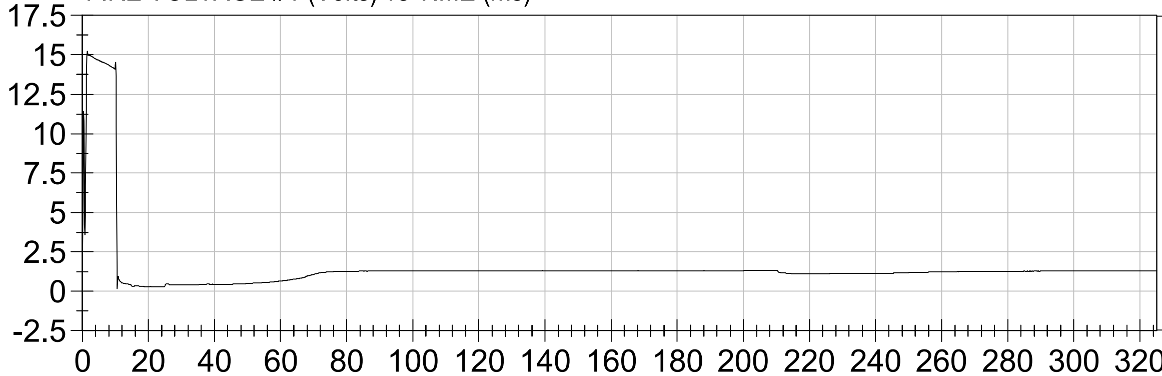
5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)



FIRE VOLTAGE #1 (Volts) vs TIME (ms)



Max: 15.2 Volts

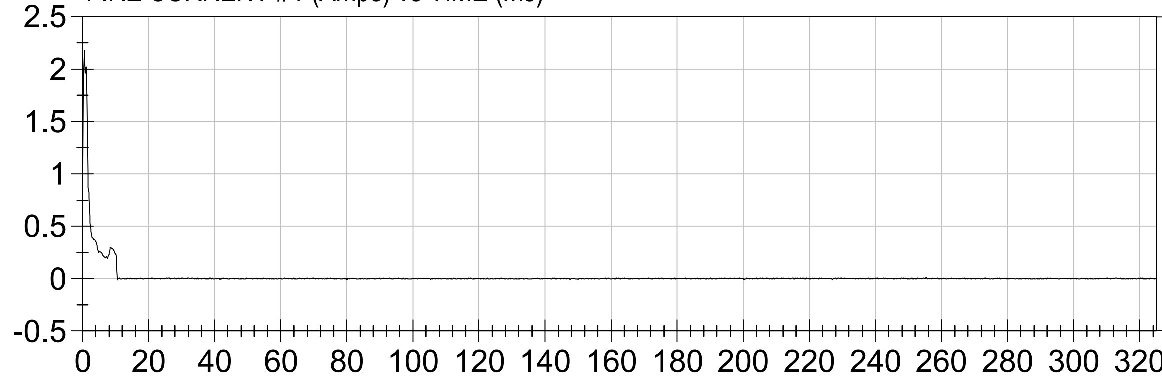
Tmax: 1.5 ms

Min: 0.2 Volts

Tmin: 10.6 ms

CFC 1000

FIRE CURRENT #1 (Amps) vs TIME (ms)



Max: 2.2 Amps

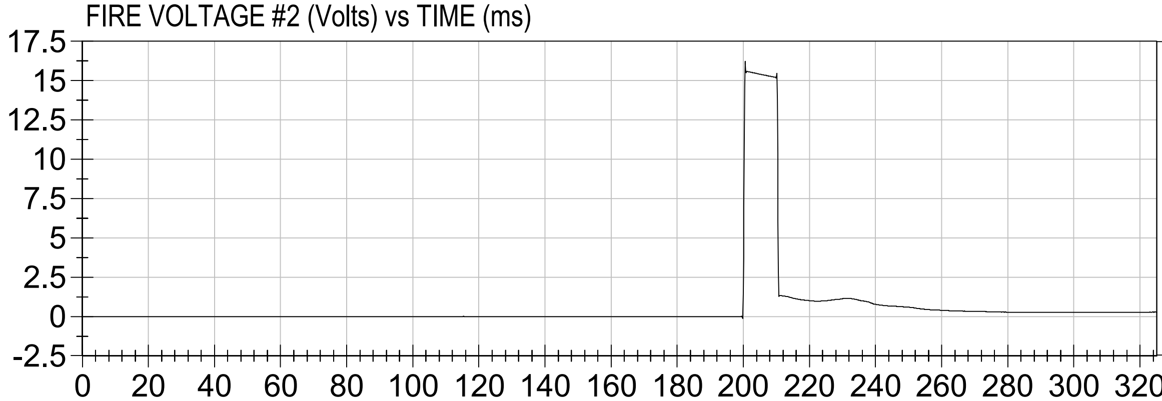
Tmax: 0.6 ms

Min: -0.0 Amps

Tmin: 10.6 ms

CFC 1000

FIRE VOLTAGE #2 (Volts) vs TIME (ms)



Max: 16.2 Volts

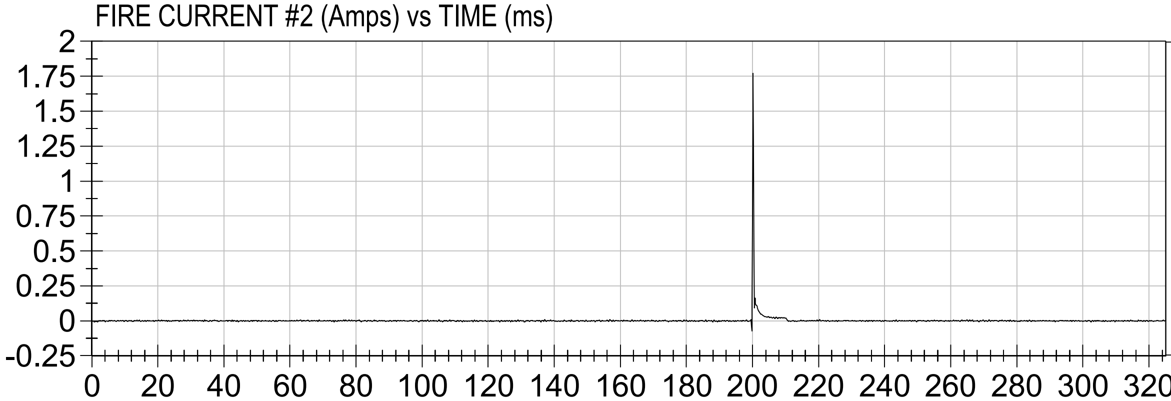
Tmax: 200.5 ms

Min: -0.1 Volts

Tmin: 199.8 ms

CFC 1000

FIRE CURRENT #2 (Amps) vs TIME (ms)



Max: 1.8 Amps

Tmax: 200.2 ms

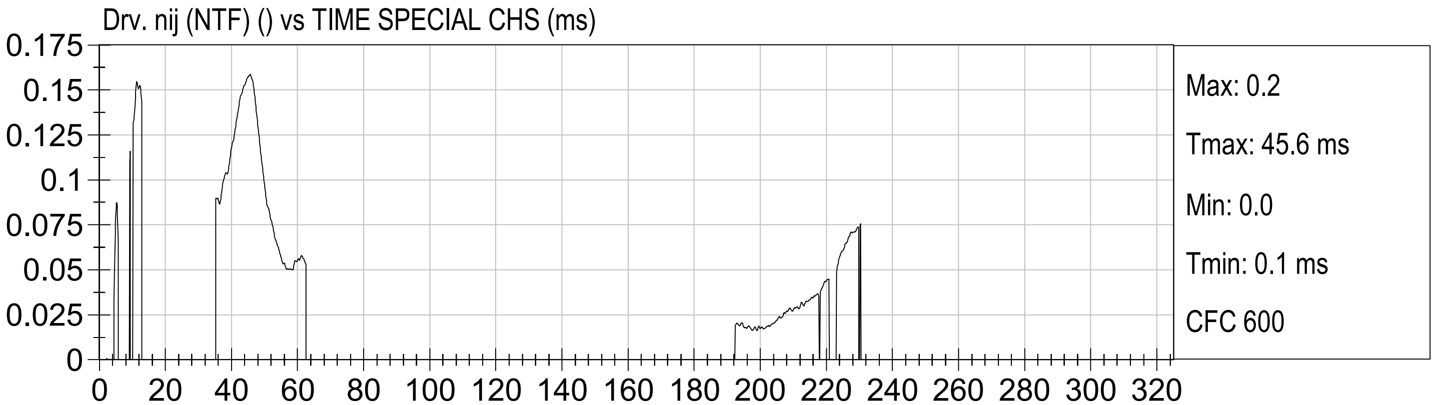
Min: -0.1 Amps

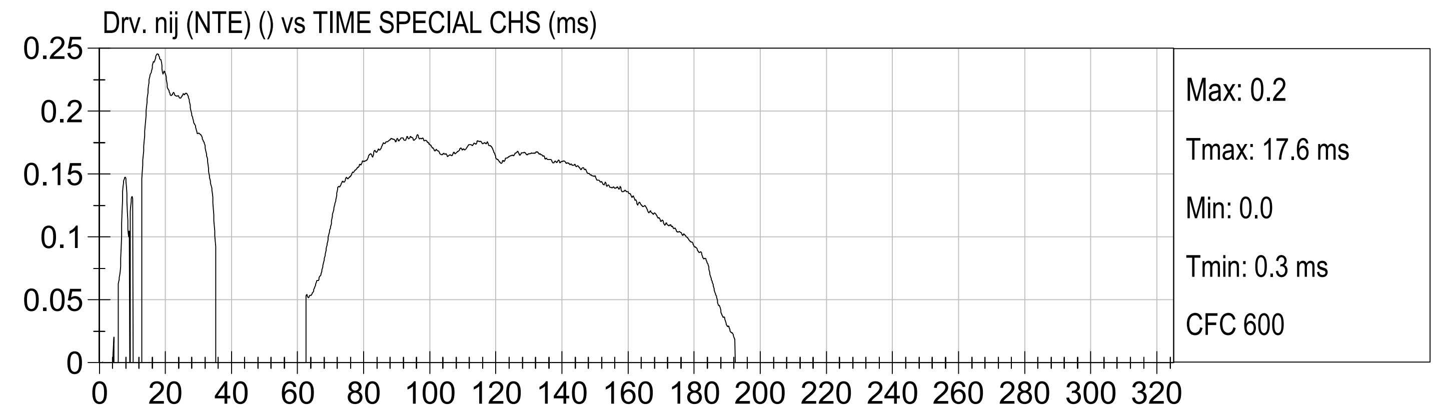
Tmin: 199.8 ms

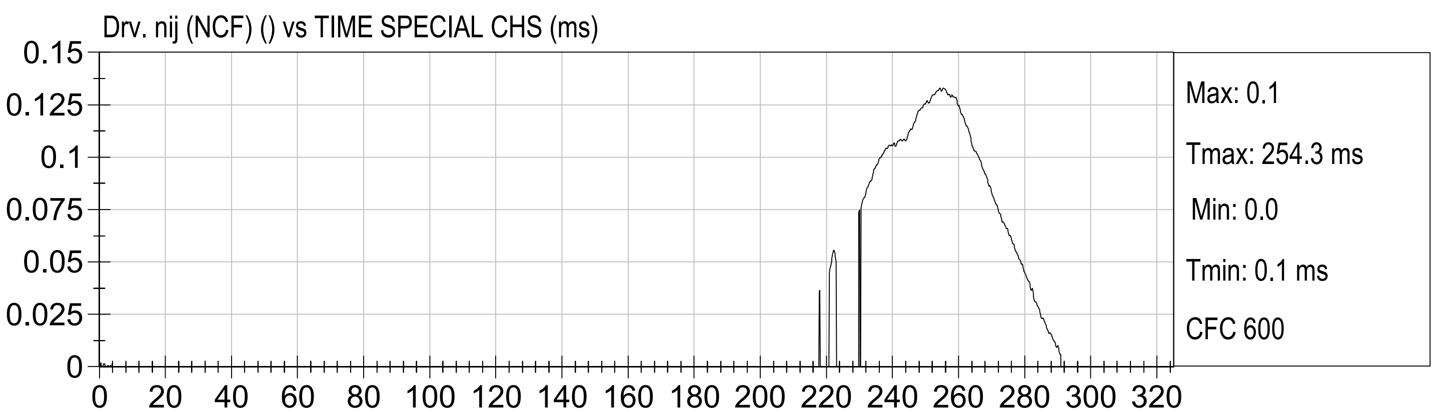
CFC 1000

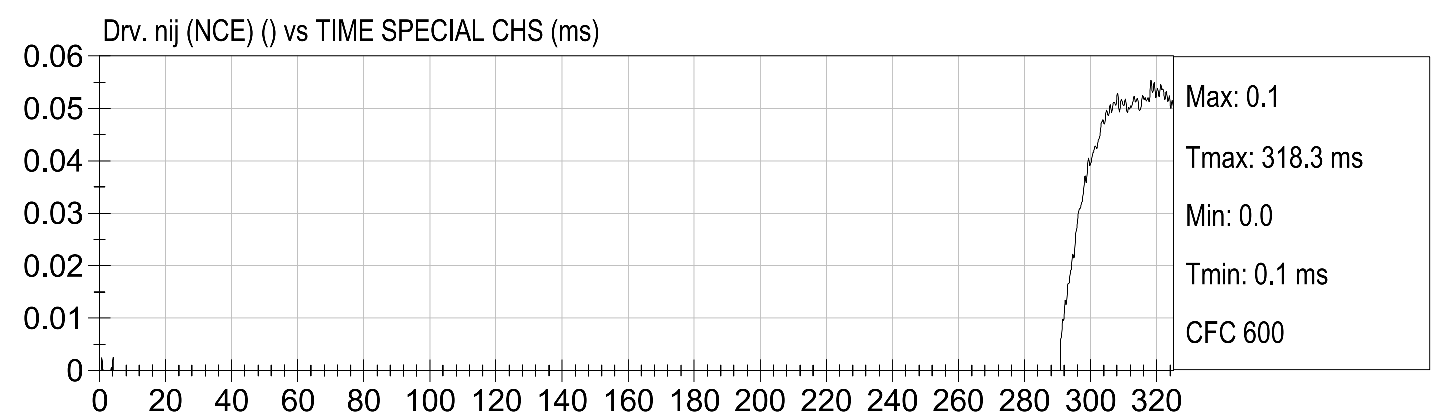
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)





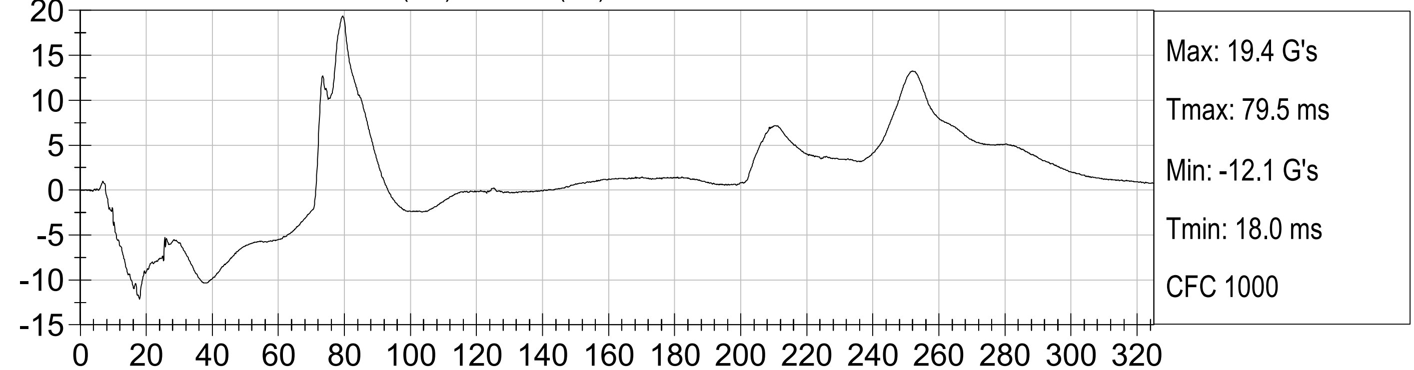




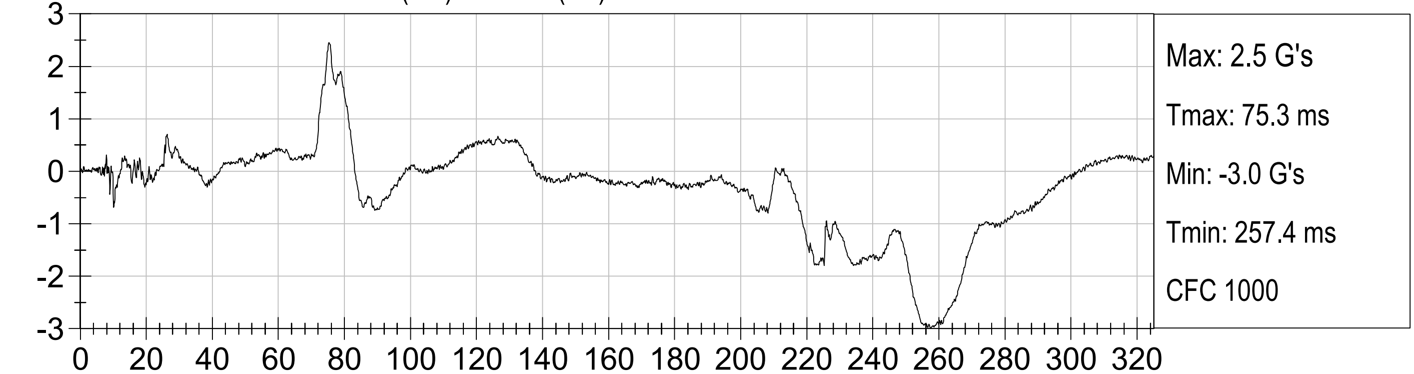
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

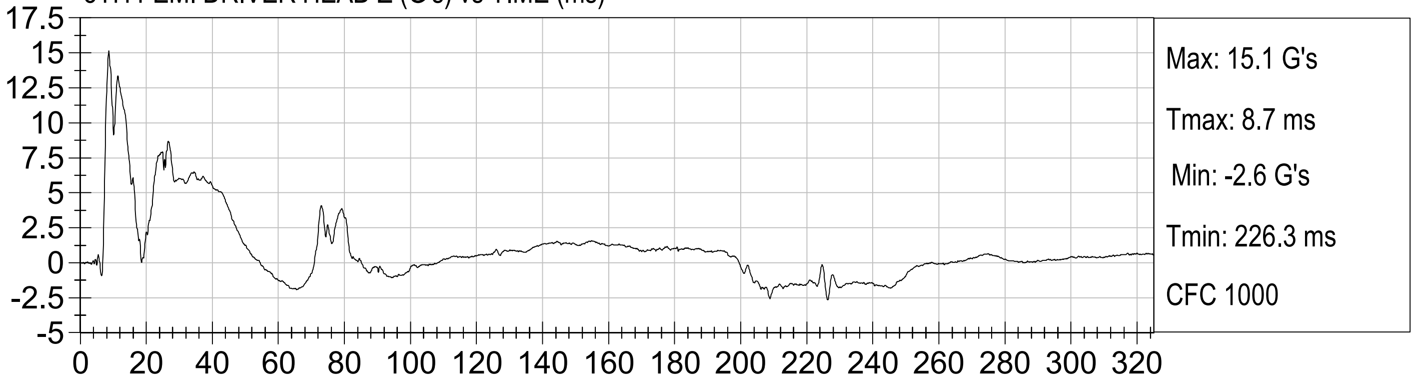
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



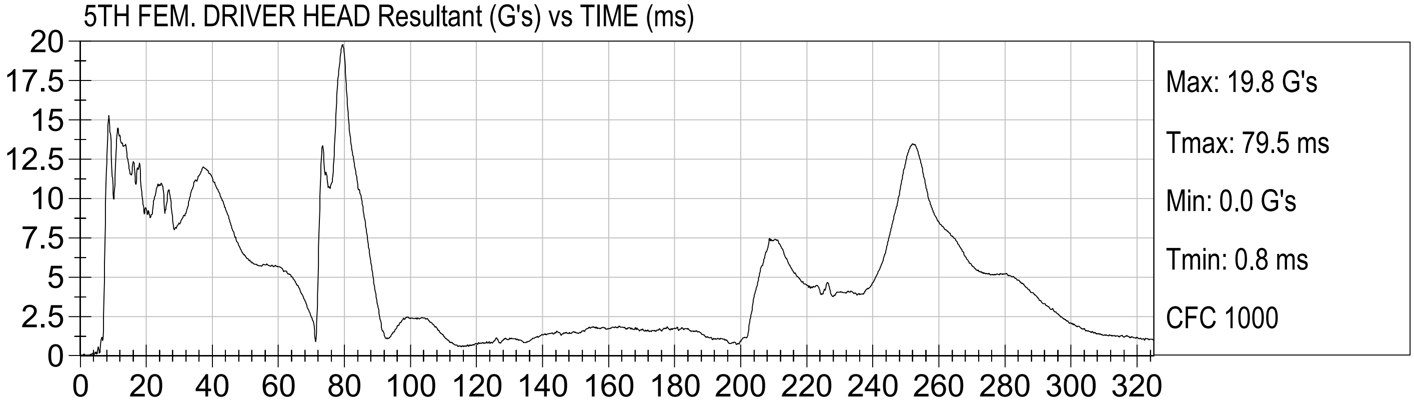
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



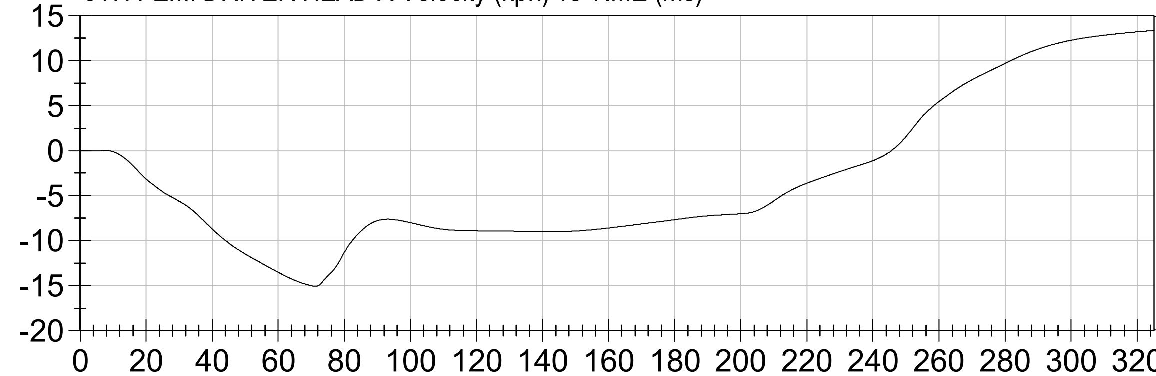
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)



LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

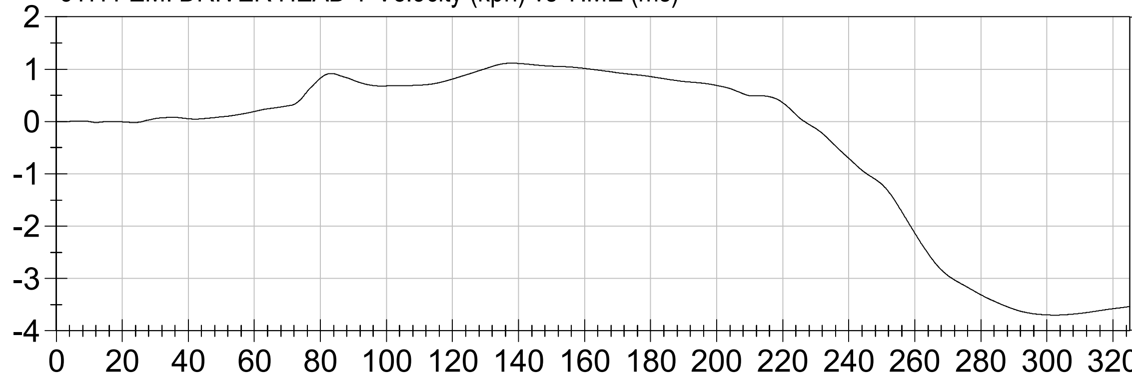
Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

5TH FEM. DRIVER HEAD X Velocity (kph) vs TIME (ms)



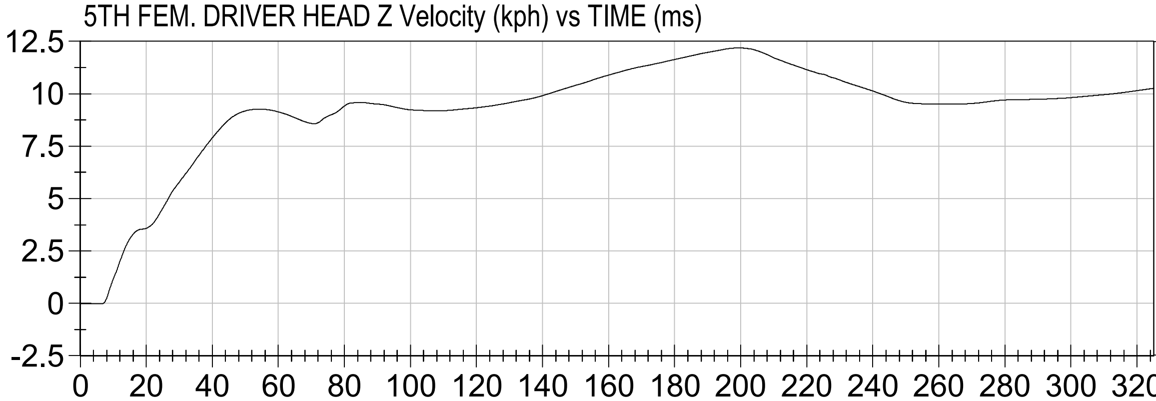
Max: 13.4 kph
Tmax: 325.0 ms
Min: -15.1 kph
Tmin: 71.2 ms
CFC 180

5TH FEM. DRIVER HEAD Y Velocity (kph) vs TIME (ms)



Max: 1.1 kph
Tmax: 137.8 ms
Min: -3.7 kph
Tmin: 302.2 ms
CFC 180

5TH FEM. DRIVER HEAD Z Velocity (kph) vs TIME (ms)

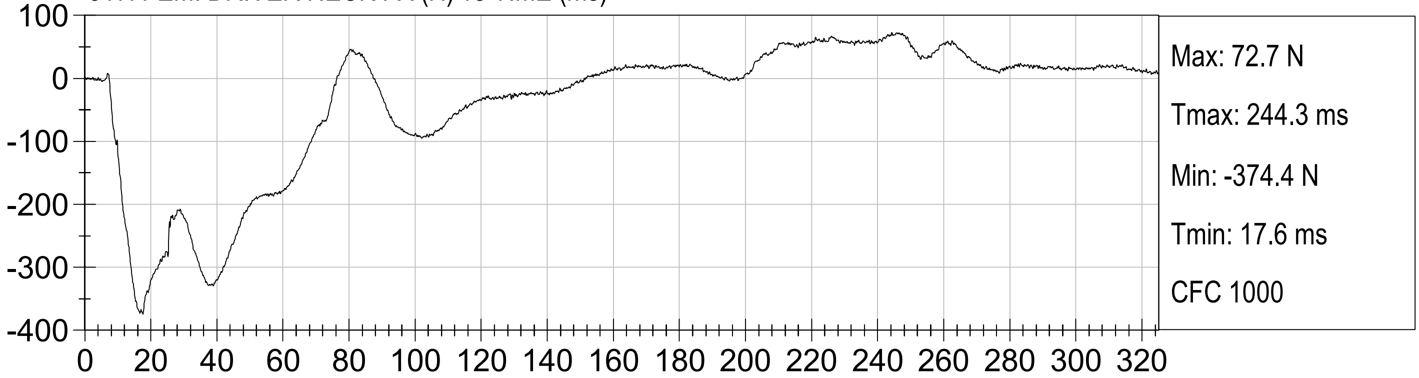


Max: 12.2 kph
Tmax: 199.5 ms
Min: -0.0 kph
Tmin: 6.5 ms
CFC 180

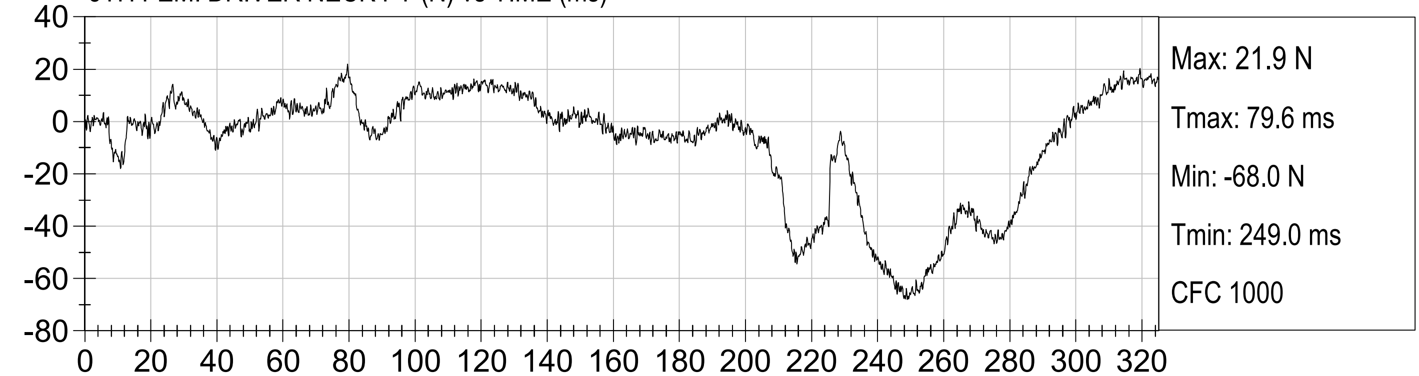
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

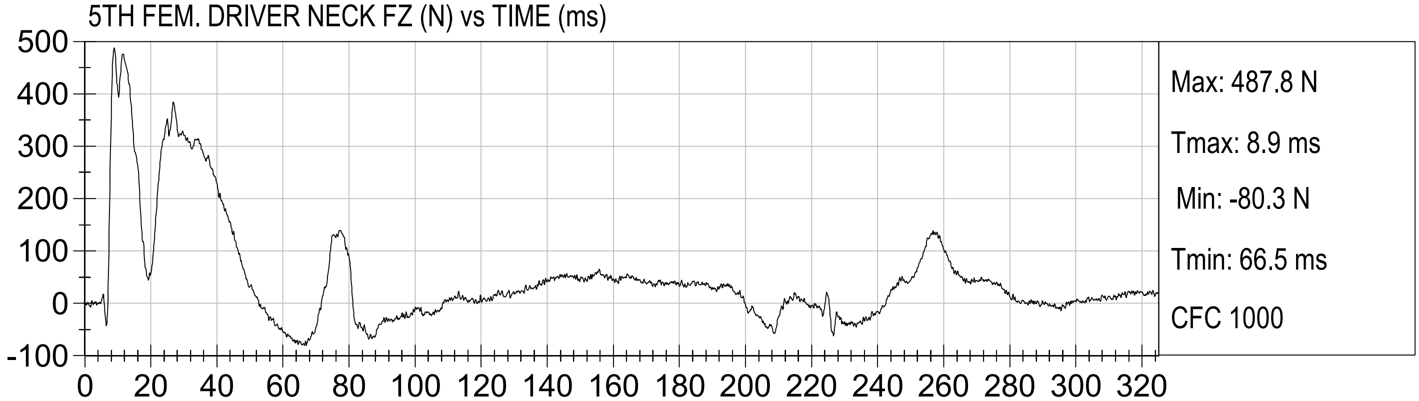
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



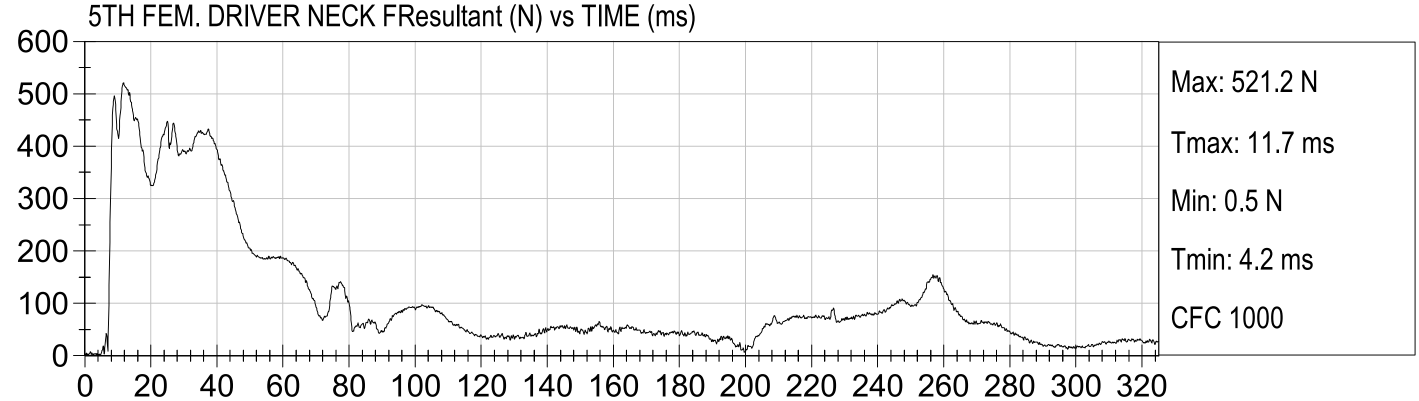
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



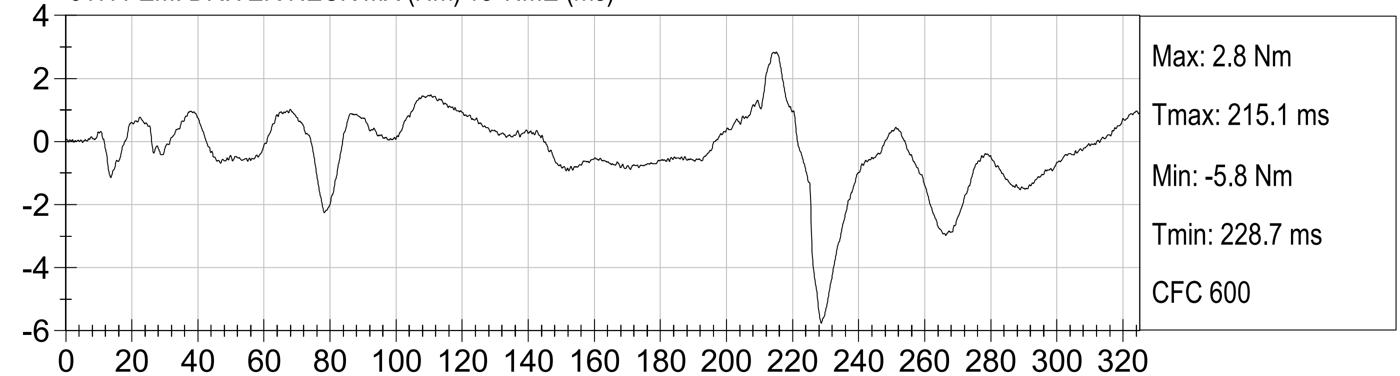
5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)



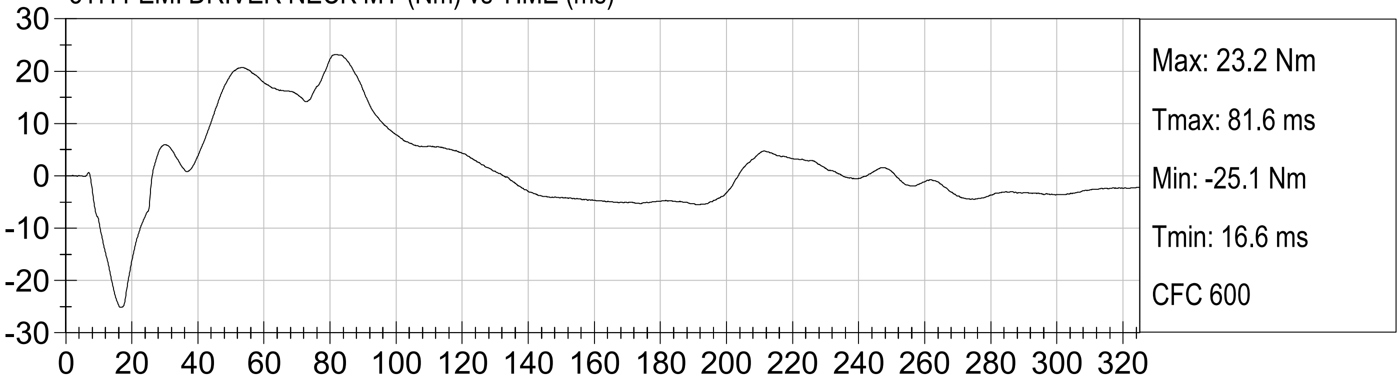
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

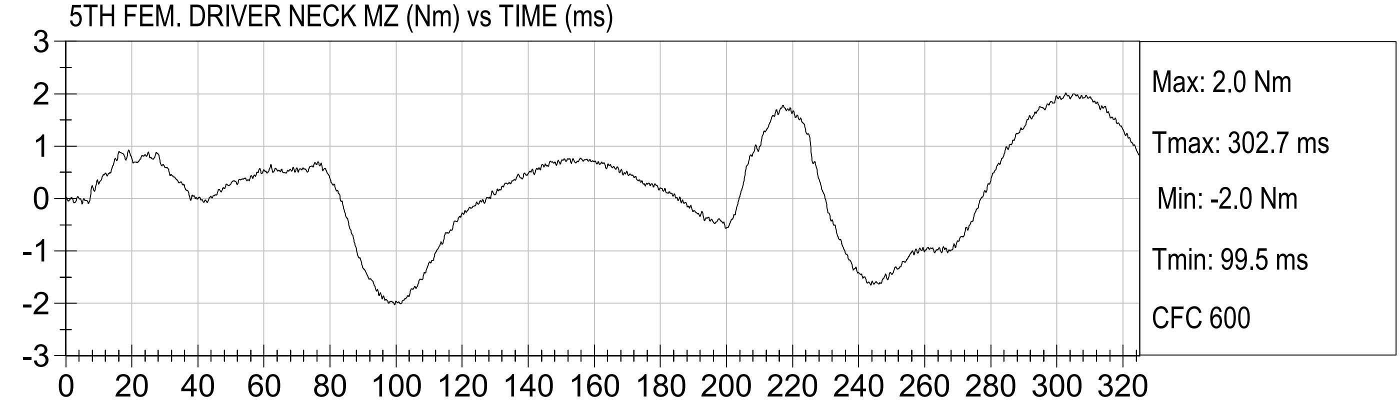
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



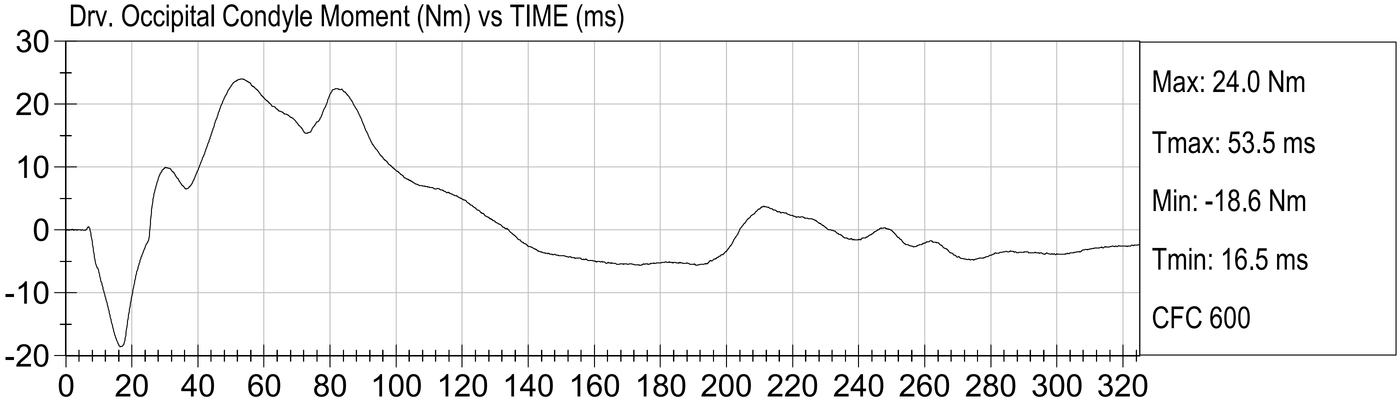
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



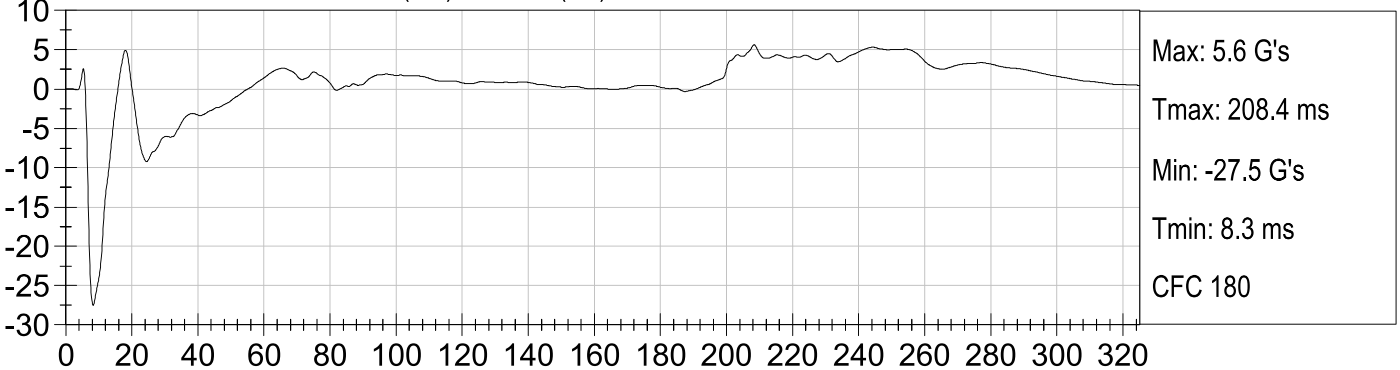
Drv. Occipital Condyle Moment (Nm) vs TIME (ms)



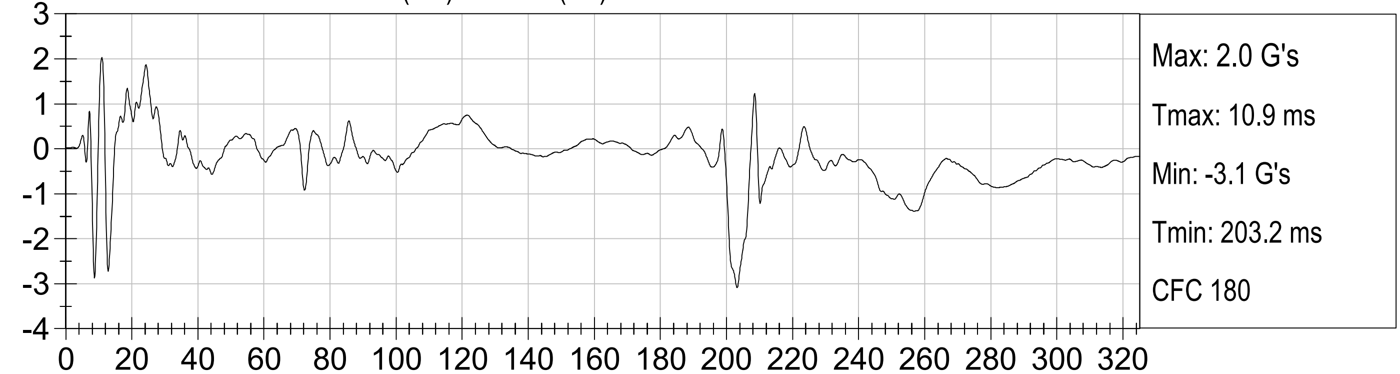
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

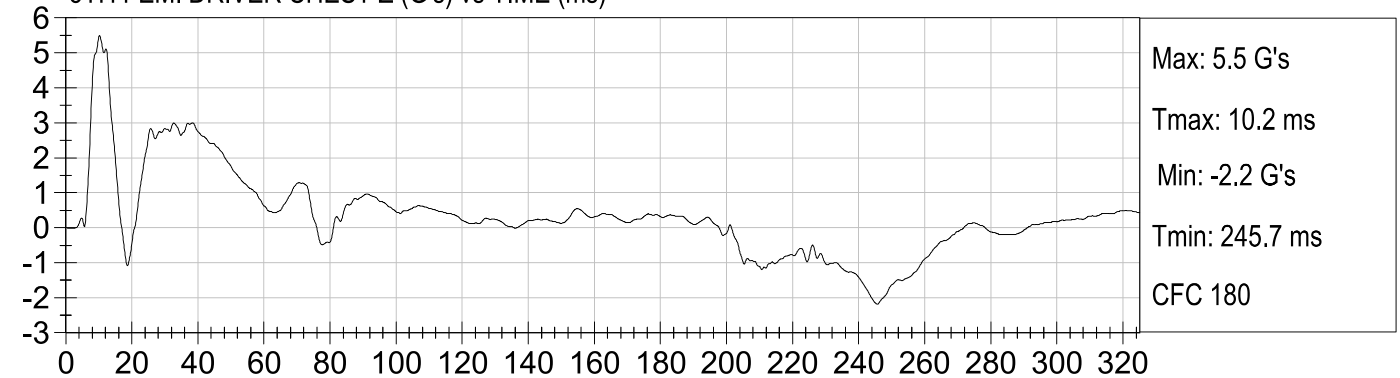
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



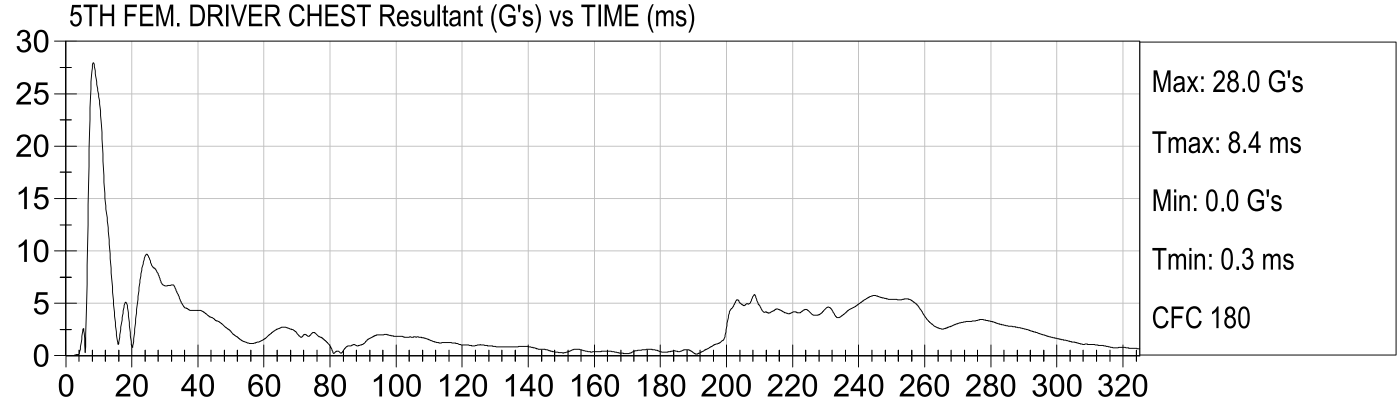
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)

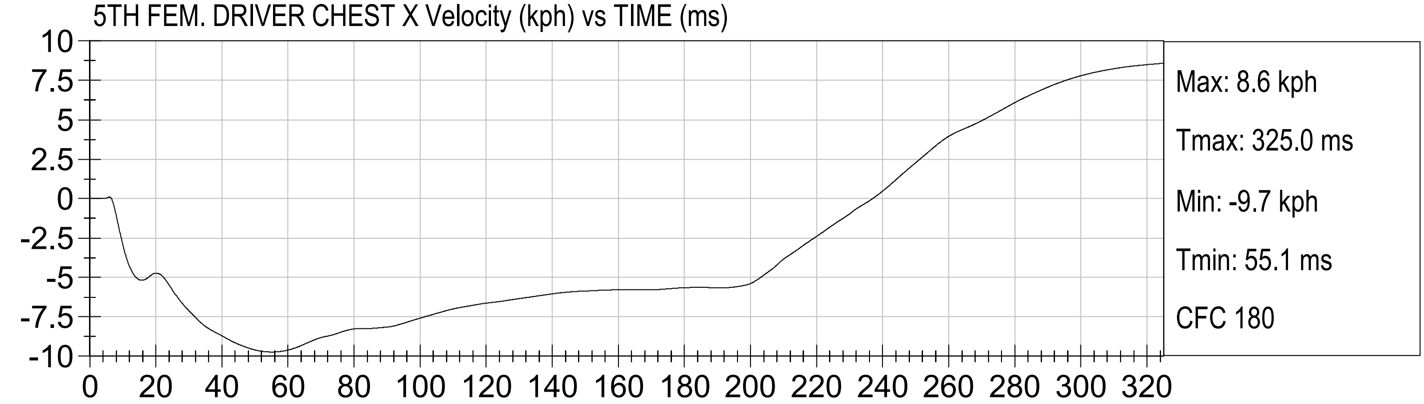


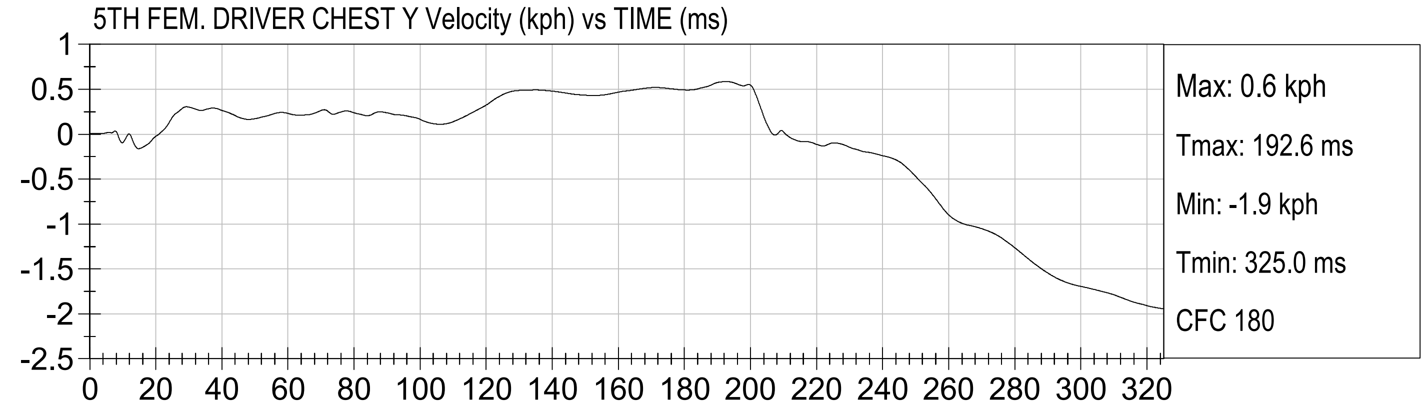
5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

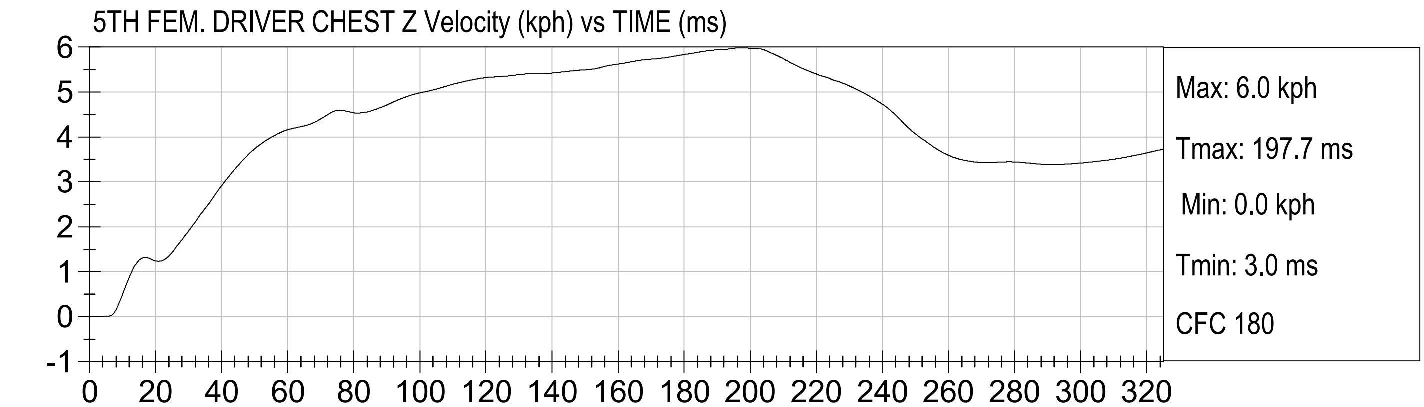


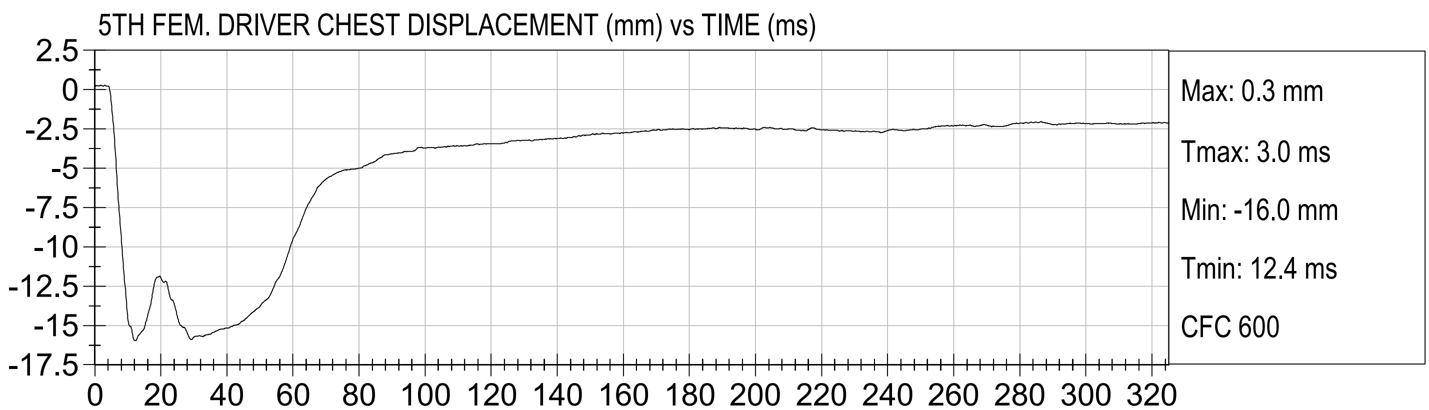
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)



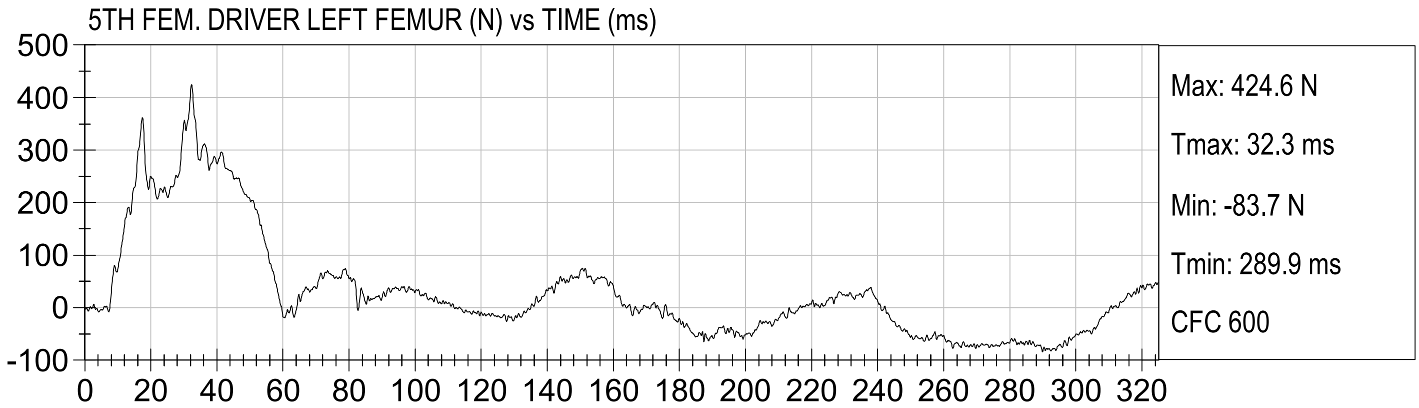


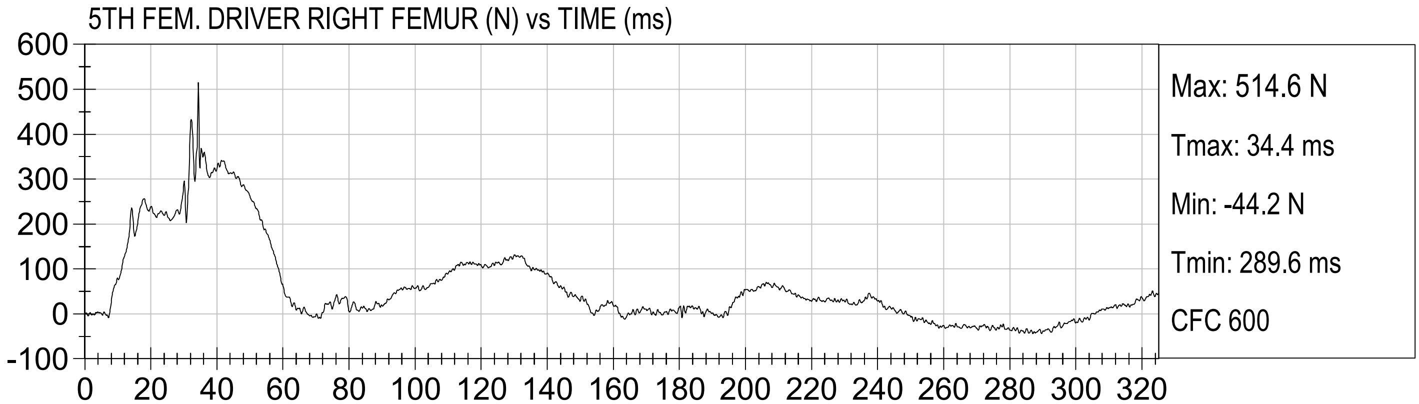




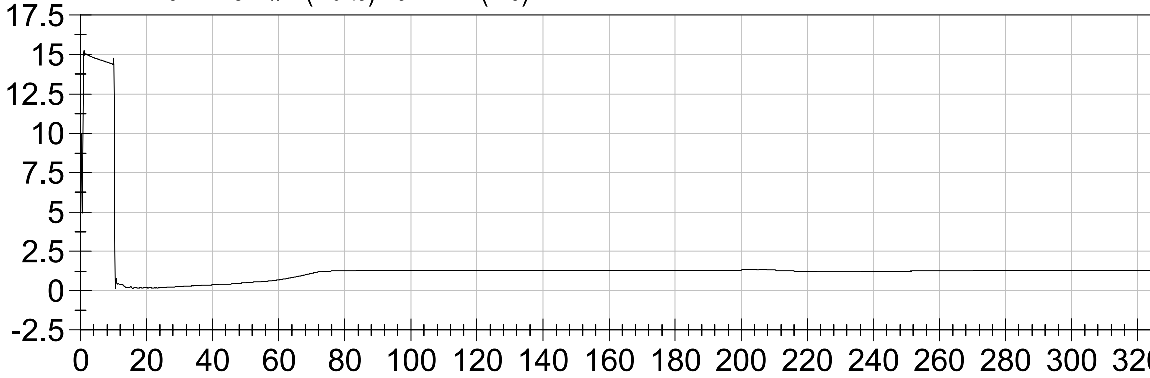
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)



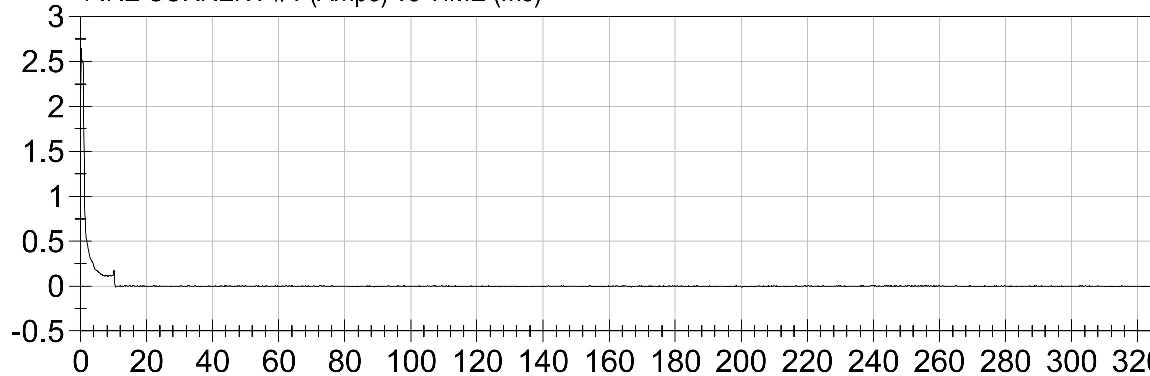


FIRE VOLTAGE #1 (Volts) vs TIME (ms)



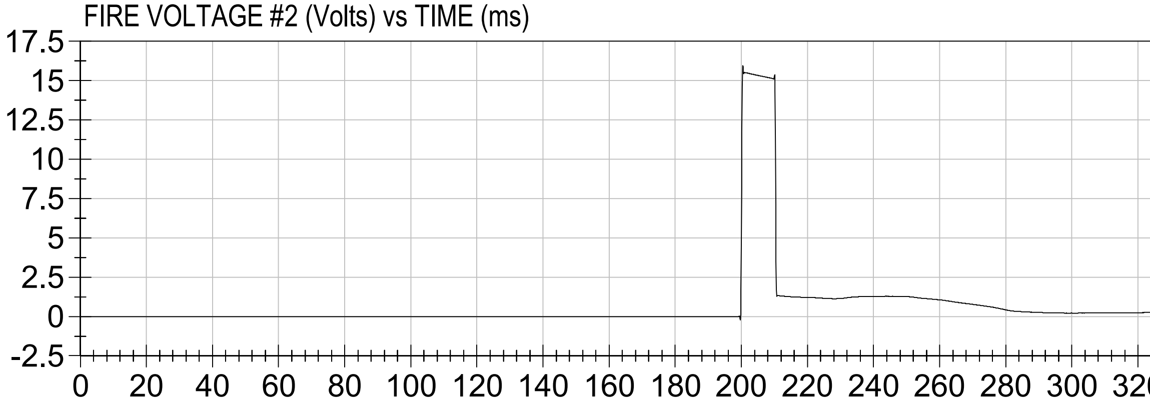
Max: 15.2 Volts
Tmax: 1.1 ms
Min: 0.1 Volts
Tmin: 15.8 ms
CFC 1000

FIRE CURRENT #1 (Amps) vs TIME (ms)



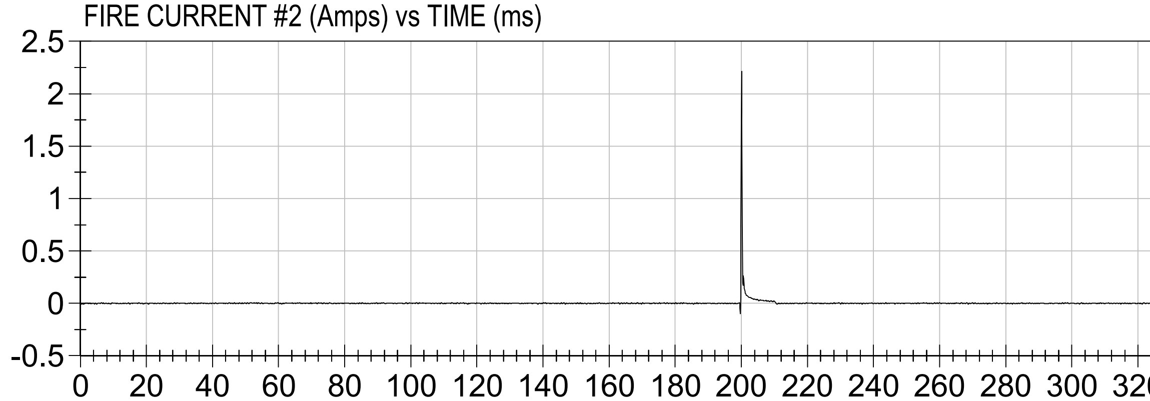
Max: 2.6 Amps
Tmax: 0.3 ms
Min: -0.0 Amps
Tmin: 10.5 ms
CFC 1000

FIRE VOLTAGE #2 (Volts) vs TIME (ms)



Max: 16.0 Volts
Tmax: 200.4 ms
Min: -0.2 Volts
Tmin: 199.7 ms
CFC 1000

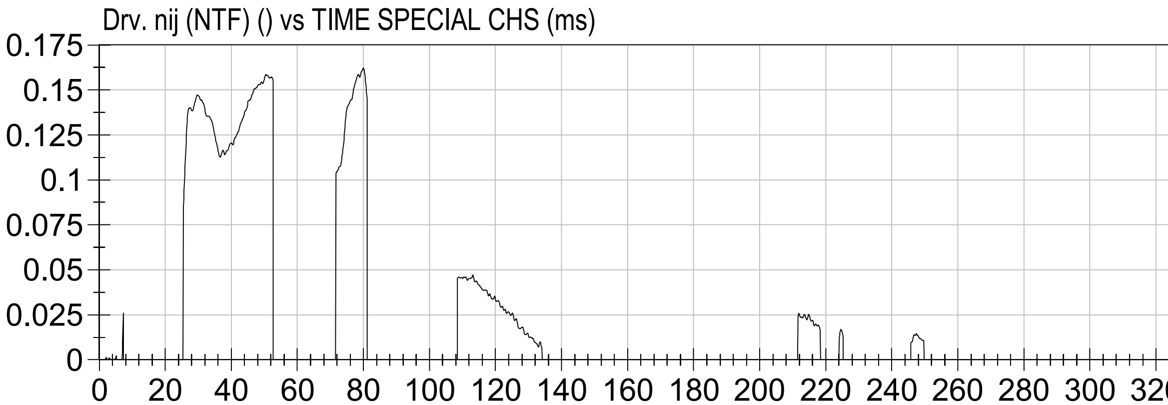
FIRE CURRENT #2 (Amps) vs TIME (ms)



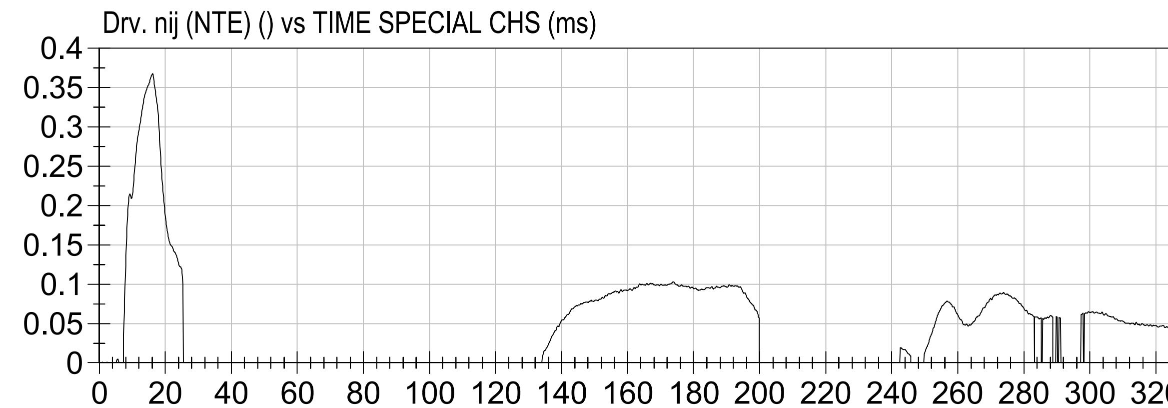
Max: 2.2 Amps
Tmax: 200.1 ms
Min: -0.1 Amps
Tmin: 199.7 ms
CFC 1000

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (5TH P2)

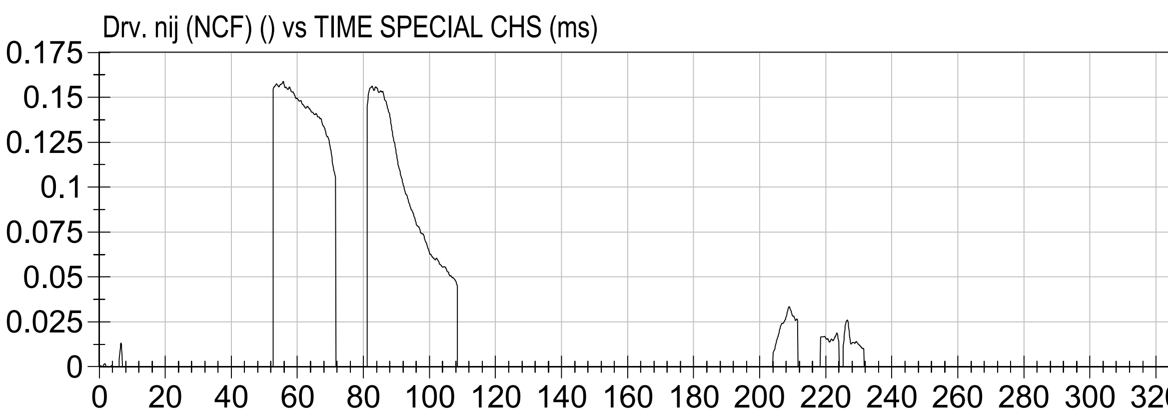
Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)



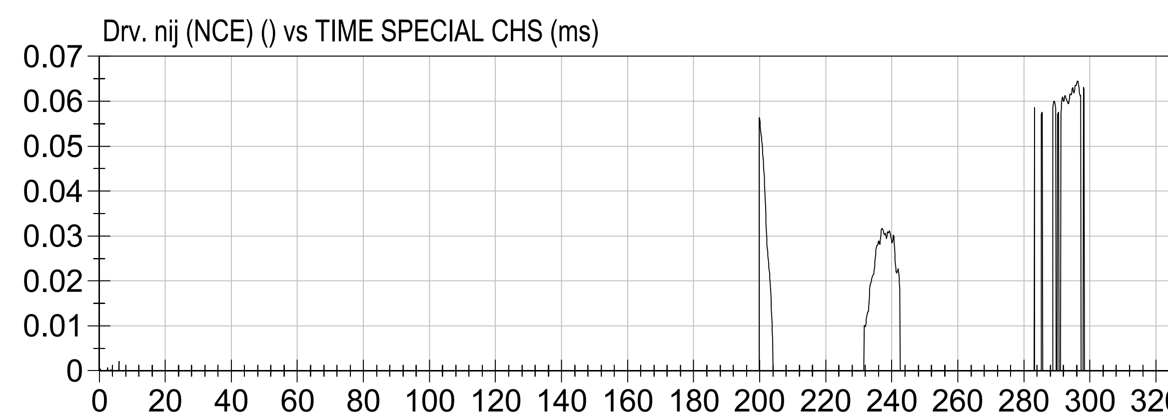
Max: 0.2
Tmax: 80.0 ms
Min: 0.0
Tmin: 0.1 ms
CFC 600



Max: 0.4
Tmax: 16.2 ms
Min: 0.0
Tmin: 0.1 ms
CFC 600



Max: 0.2
Tmax: 55.7 ms
Min: 0.0
Tmin: 0.1 ms
CFC 600



Max: 0.1
Tmax: 296.2 ms
Min: 0.0
Tmin: 0.4 ms
CFC 600

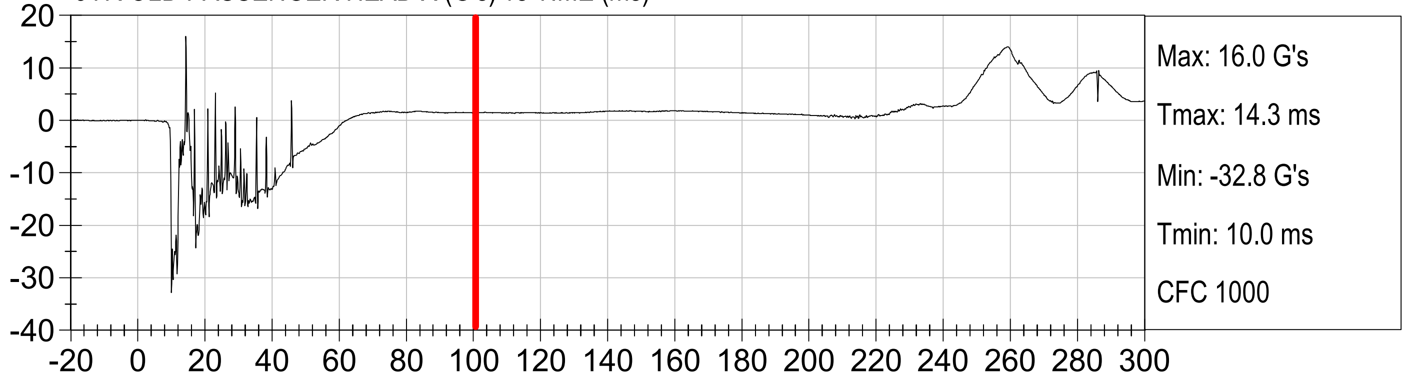
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

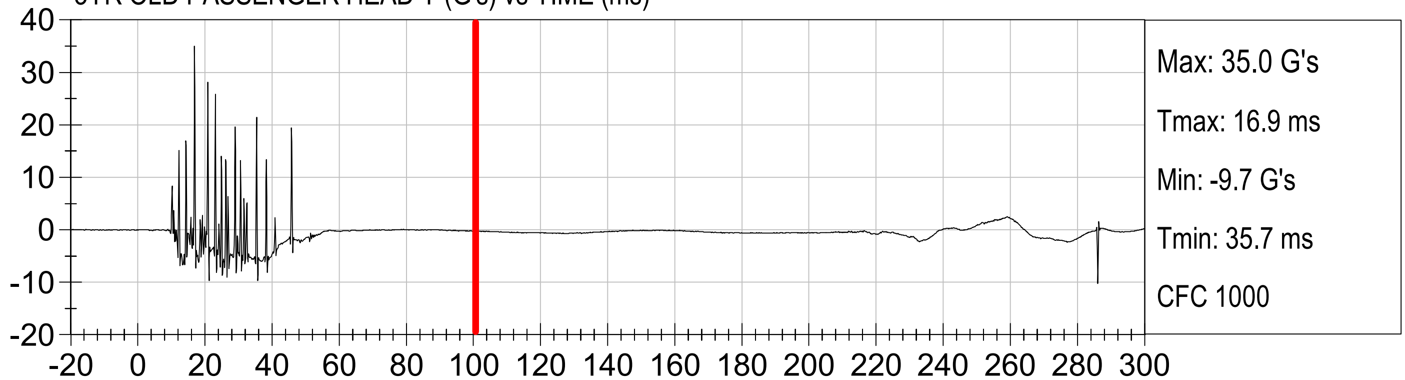
Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

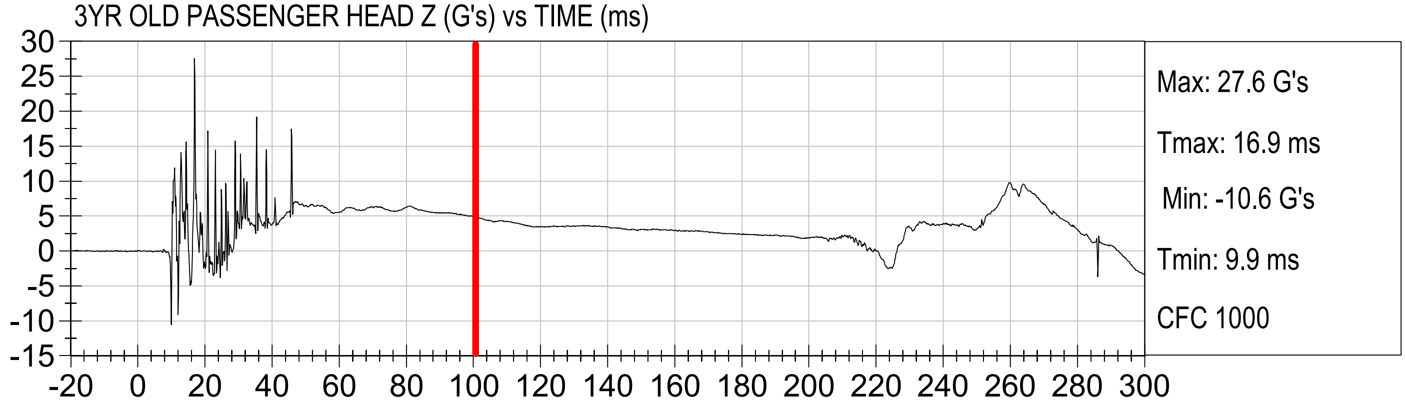
3YR OLD PASSENGER HEAD X (G's) vs TIME (ms)



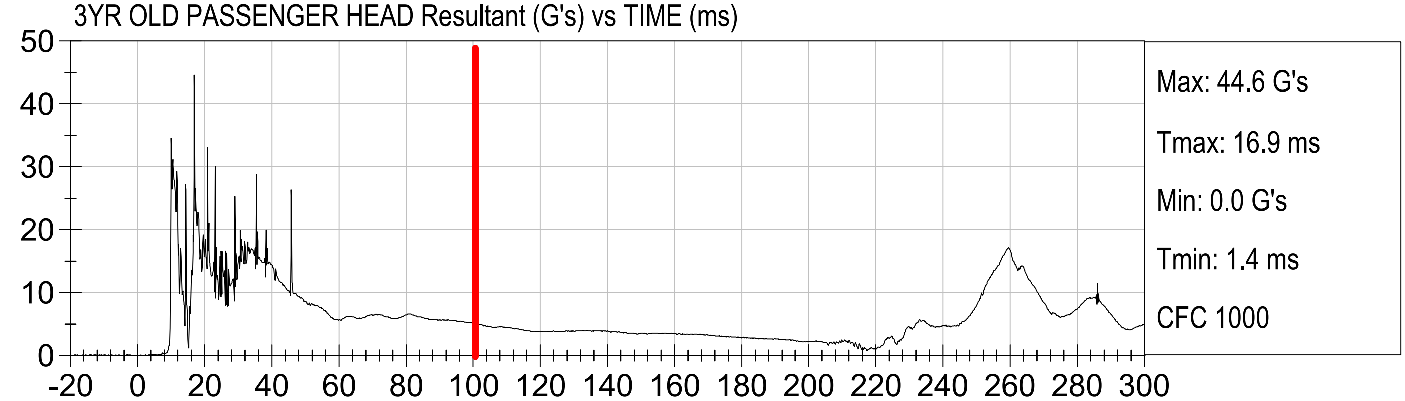
3YR OLD PASSENGER HEAD Y (G's) vs TIME (ms)



3YR OLD PASSENGER HEAD Z (G's) vs TIME (ms)



3YR OLD PASSENGER HEAD Resultant (G's) vs TIME (ms)



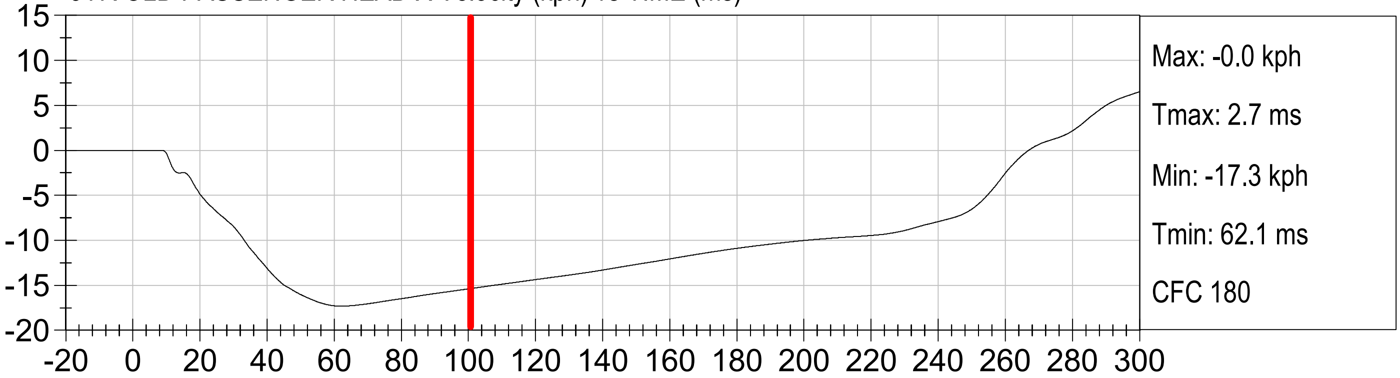
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

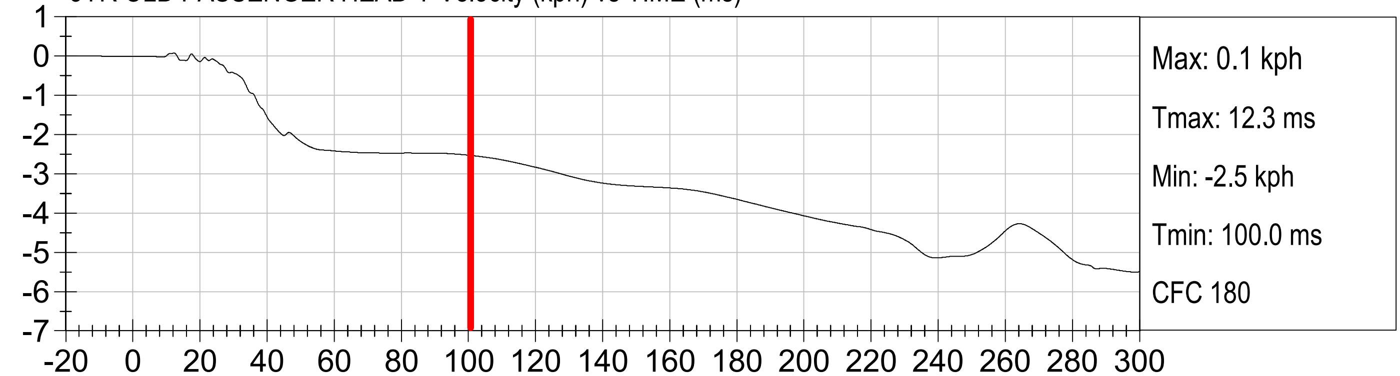
Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

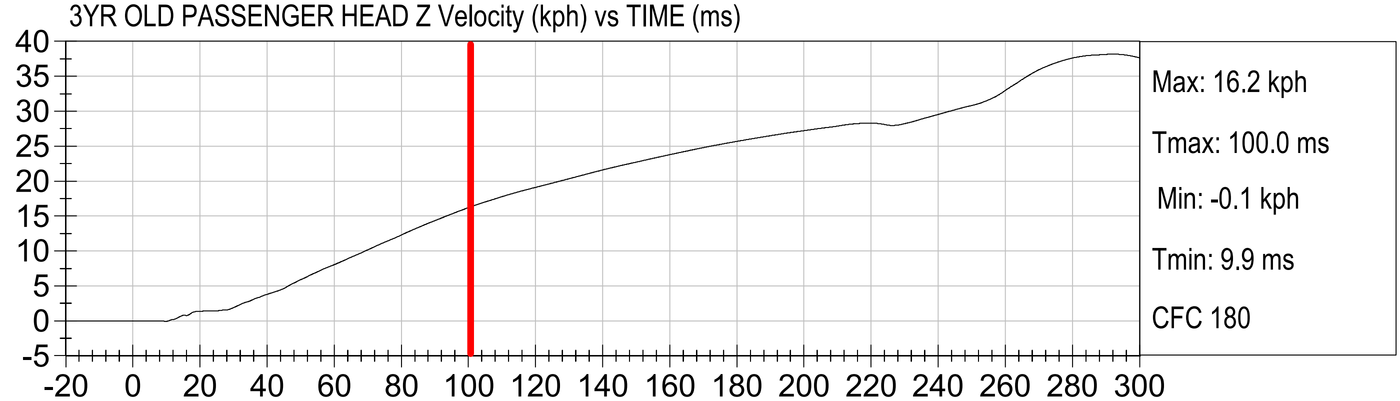
3YR OLD PASSENGER HEAD X Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER HEAD Y Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER HEAD Z Velocity (kph) vs TIME (ms)



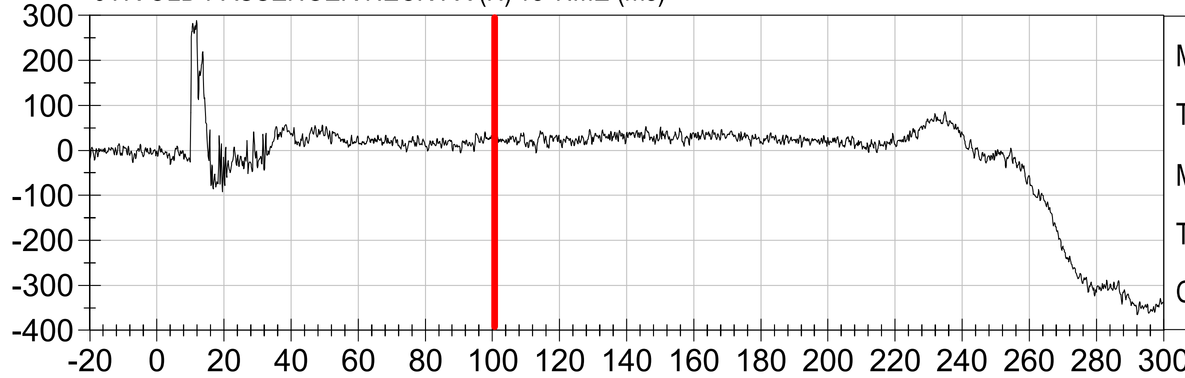
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

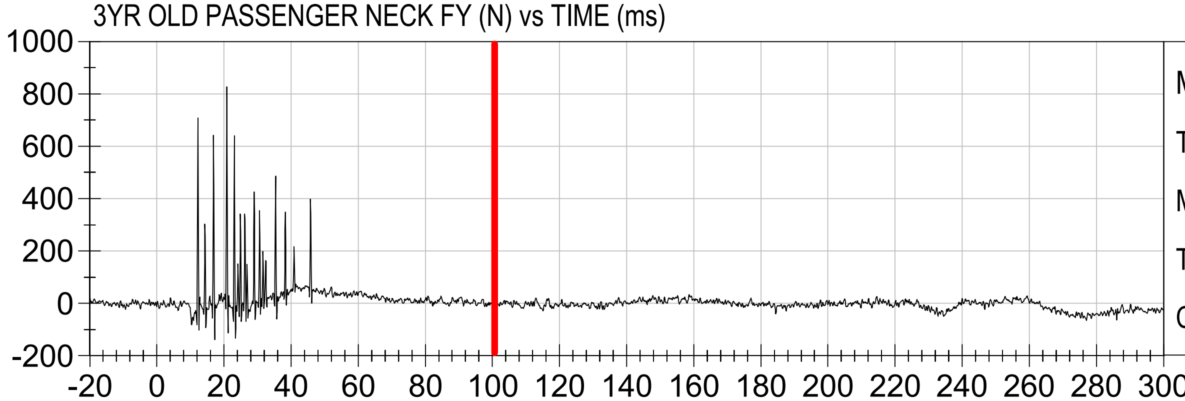
Injury Values Calculated between 0ms and 100ms

3YR OLD PASSENGER NECK FX (N) vs TIME (ms)



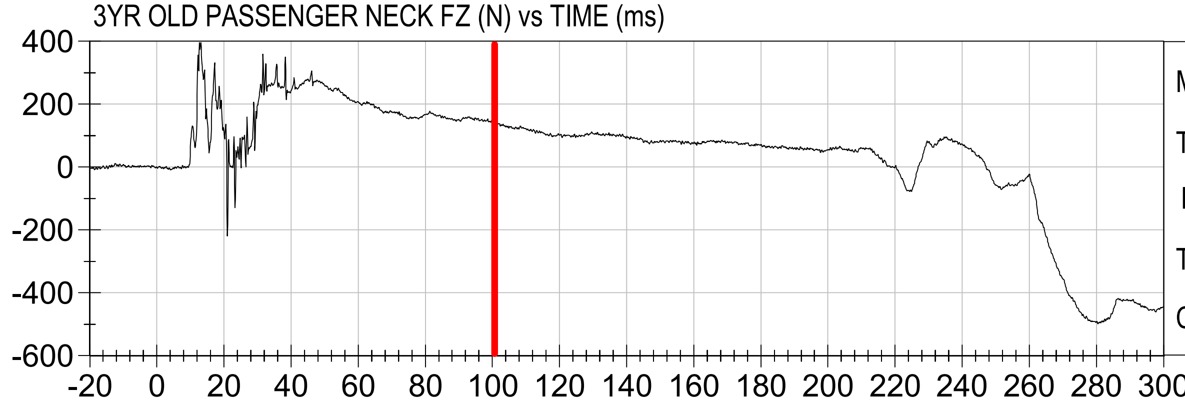
Max: 289.3 N
Tmax: 11.8 ms
Min: -92.0 N
Tmin: 19.5 ms
CFC 1000

3YR OLD PASSENGER NECK FY (N) vs TIME (ms)



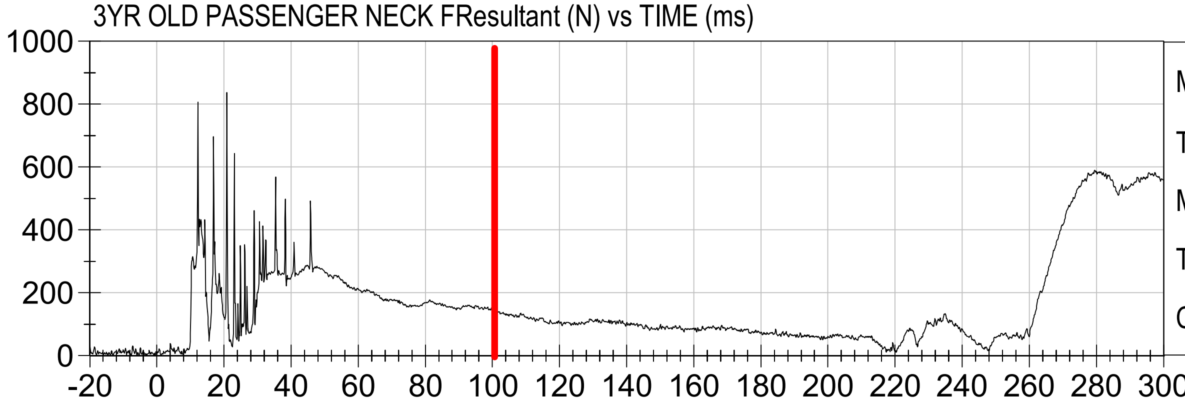
Max: 827.3 N
Tmax: 20.9 ms
Min: -139.4 N
Tmin: 17.2 ms
CFC 1000

3YR OLD PASSENGER NECK FZ (N) vs TIME (ms)



Max: 396.6 N
Tmax: 12.7 ms
Min: -219.1 N
Tmin: 21.0 ms
CFC 1000

3YR OLD PASSENGER NECK FResultant (N) vs TIME (ms)



Max: 837.8 N
Tmax: 20.9 ms
Min: 2.3 N
Tmin: 1.3 ms
CFC 1000

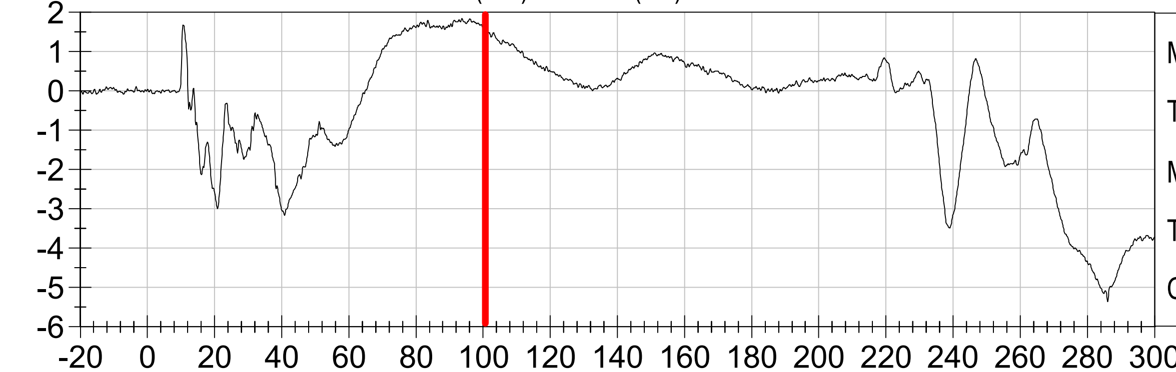
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

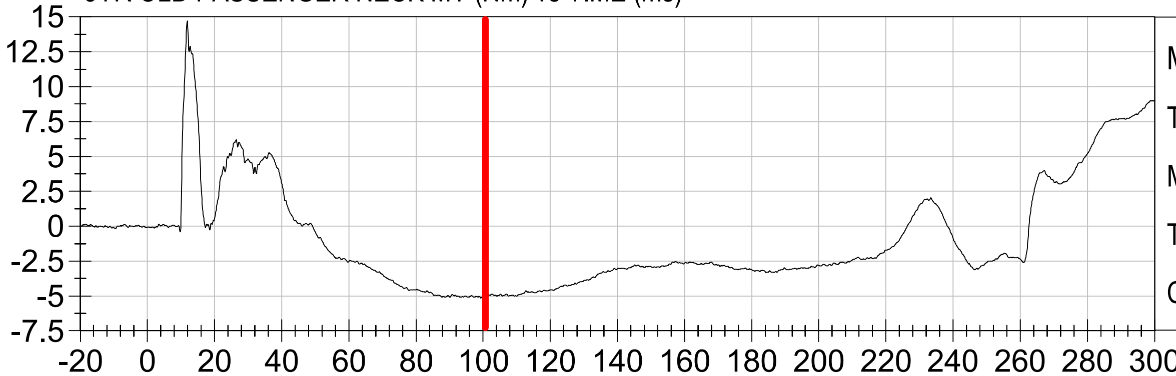
Injury Values Calculated between 0ms and 100ms

3YR OLD PASSENGER NECK MX (Nm) vs TIME (ms)



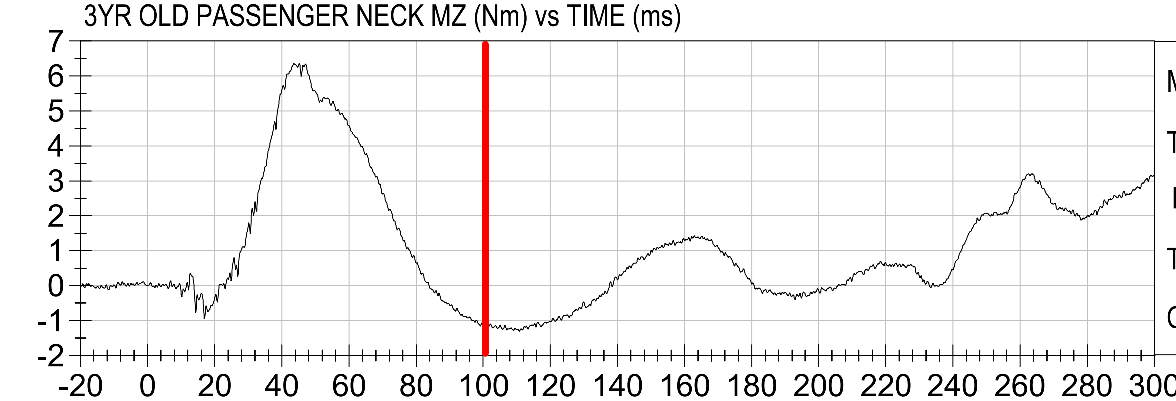
Max: 1.8 Nm
Tmax: 93.7 ms
Min: -3.2 Nm
Tmin: 40.8 ms
CFC 600

3YR OLD PASSENGER NECK MY (Nm) vs TIME (ms)



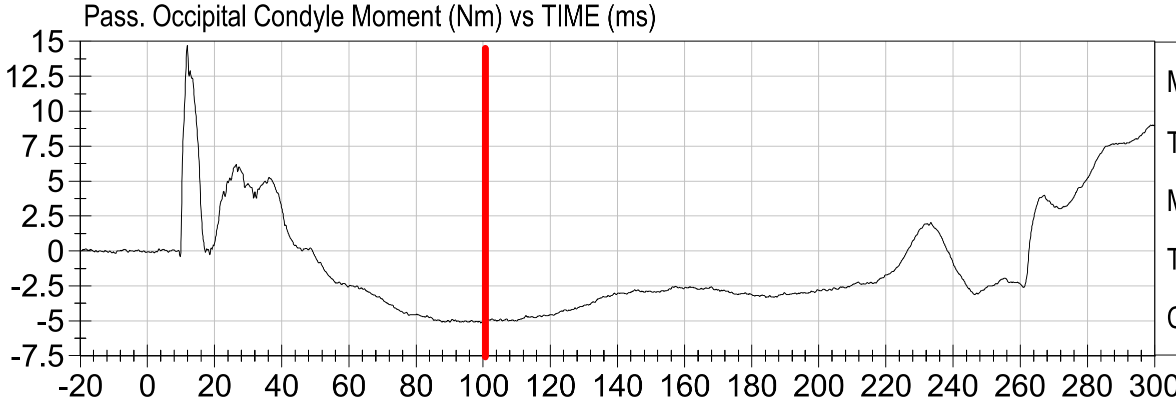
Max: 14.7 Nm
Tmax: 11.9 ms
Min: -5.1 Nm
Tmin: 99.4 ms
CFC 600

3YR OLD PASSENGER NECK MZ (Nm) vs TIME (ms)



Max: 6.4 Nm
Tmax: 45.2 ms
Min: -1.2 Nm
Tmin: 100.0 ms
CFC 600

Pass. Occipital Condyle Moment (Nm) vs TIME (ms)



Max: 14.7 Nm
Tmax: 11.9 ms
Min: -5.1 Nm
Tmin: 99.4 ms
CFC 600

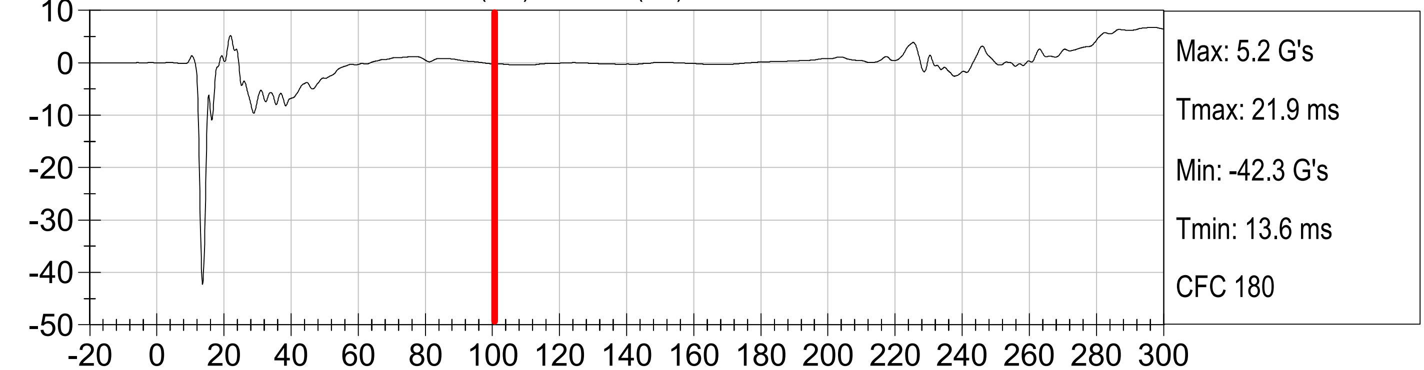
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

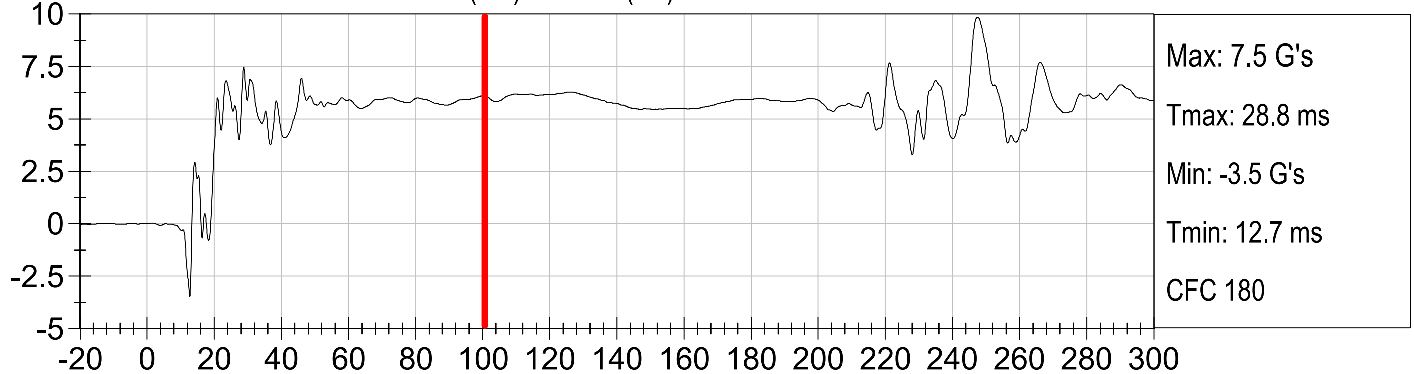
Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

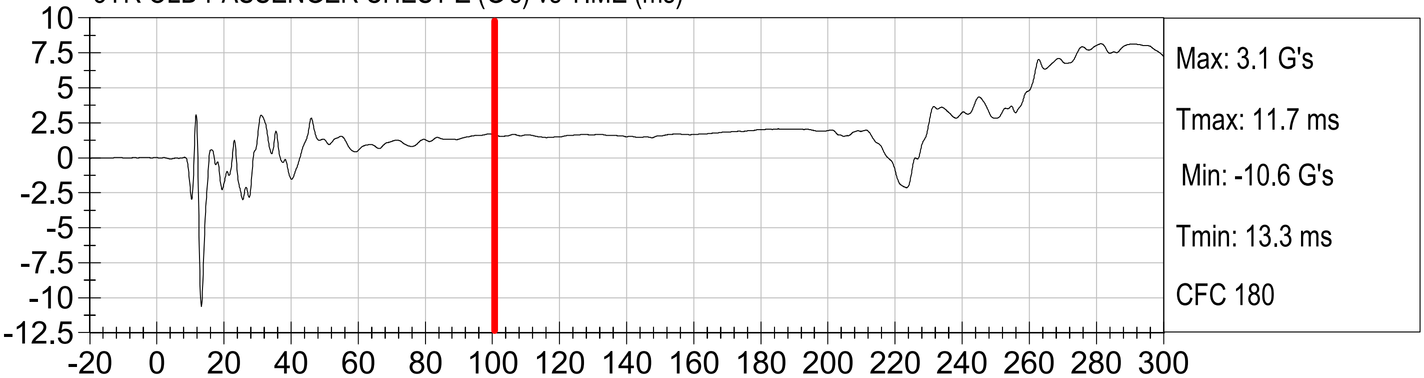
3YR OLD PASSENGER CHEST X (G's) vs TIME (ms)



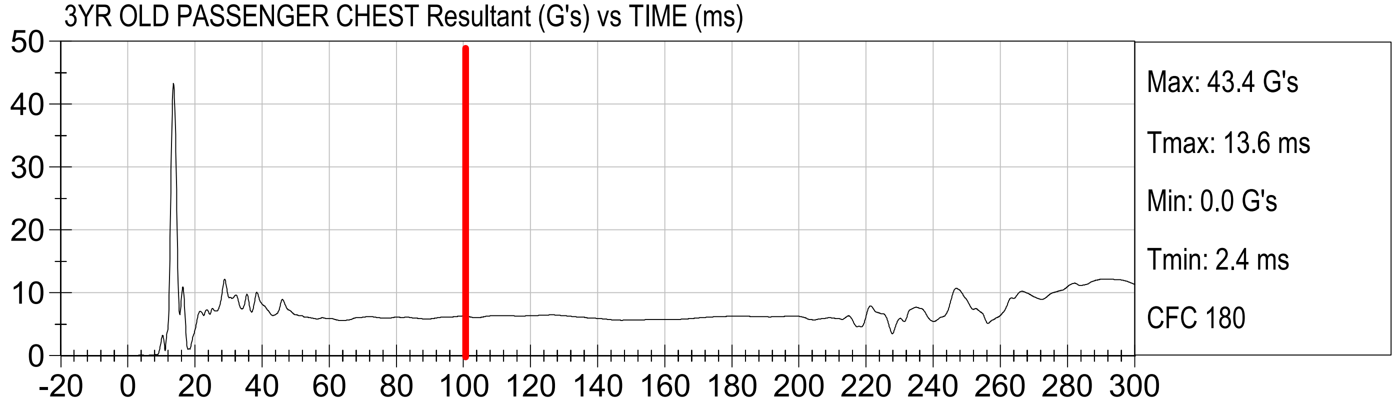
3YR OLD PASSENGER CHEST Y (G's) vs TIME (ms)



3YR OLD PASSENGER CHEST Z (G's) vs TIME (ms)



3YR OLD PASSENGER CHEST Resultant (G's) vs TIME (ms)

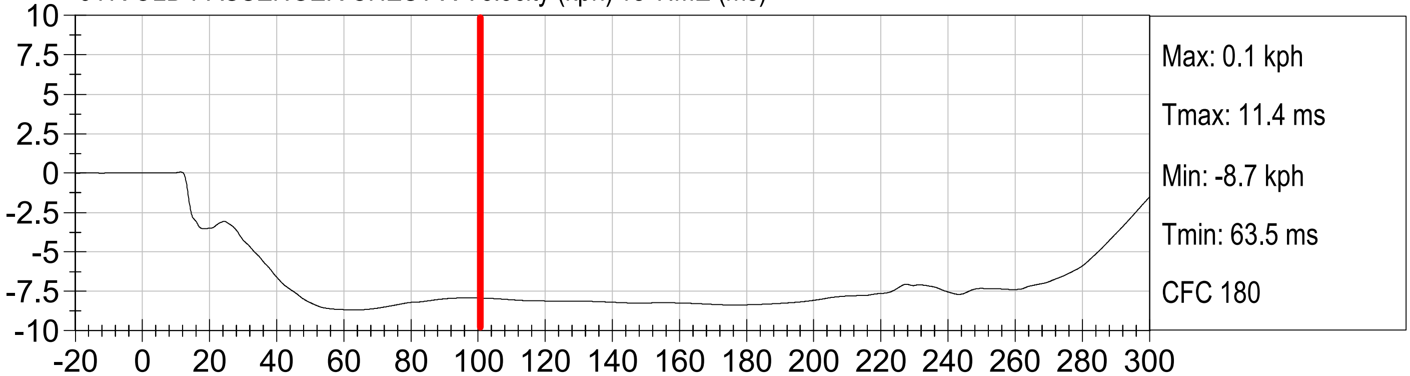


Due to a dummy grounding problem, this data is included for information purposes only.

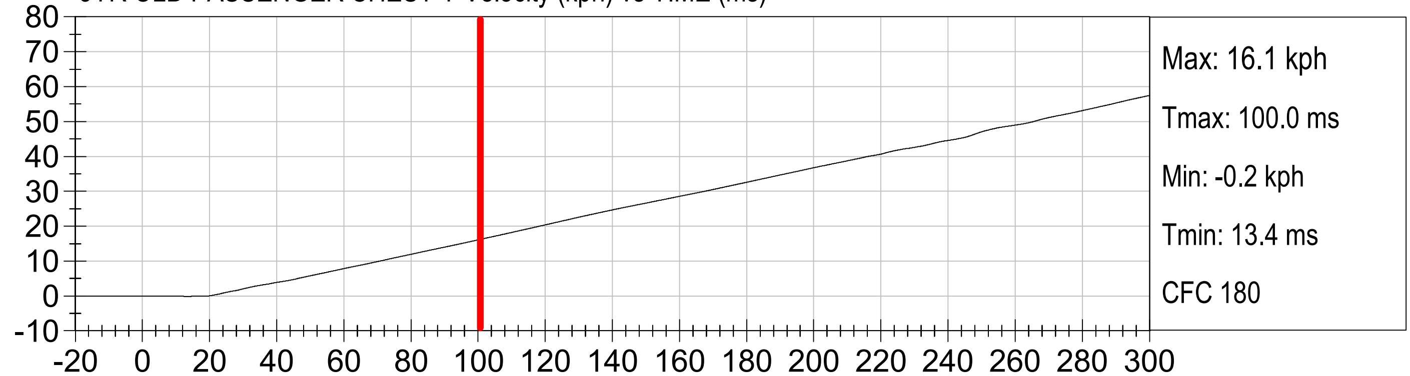
LOW RISK DEPLOYMENT 2006 Mercedes E350 (C60503) (3YO P1)	Test Date: 02/15/06 Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

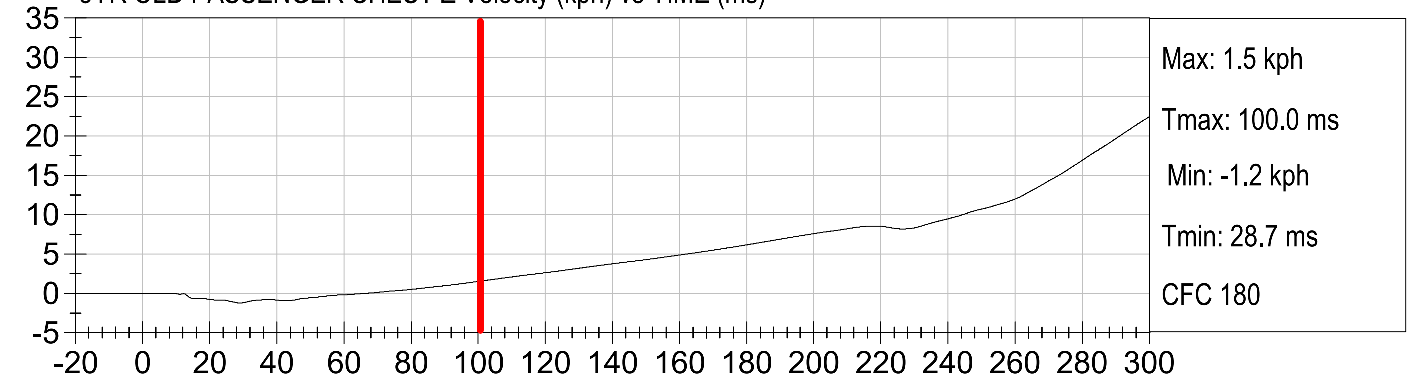
3YR OLD PASSENGER CHEST X Velocity (kph) vs TIME (ms)



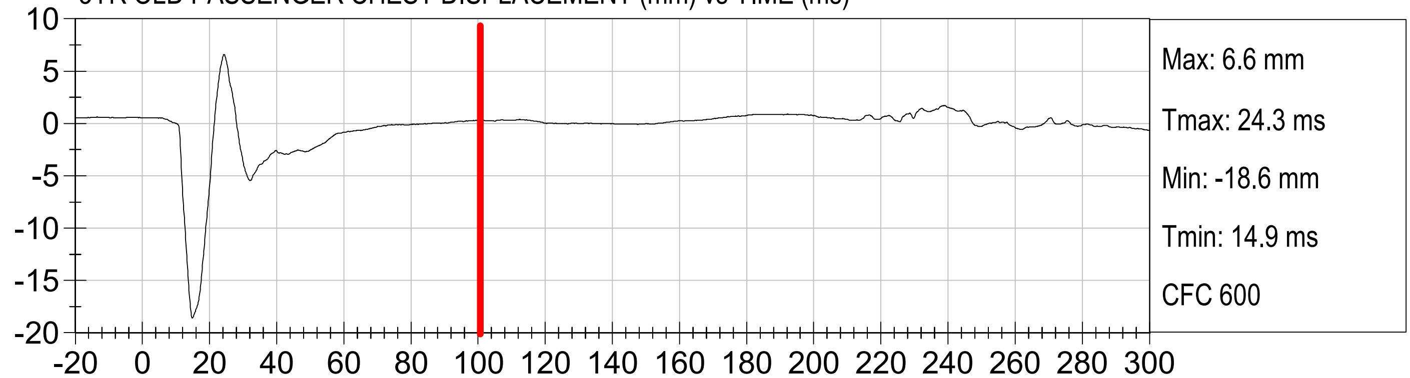
3YR OLD PASSENGER CHEST Y Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER CHEST Z Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER CHEST DISPLACEMENT (mm) vs TIME (ms)



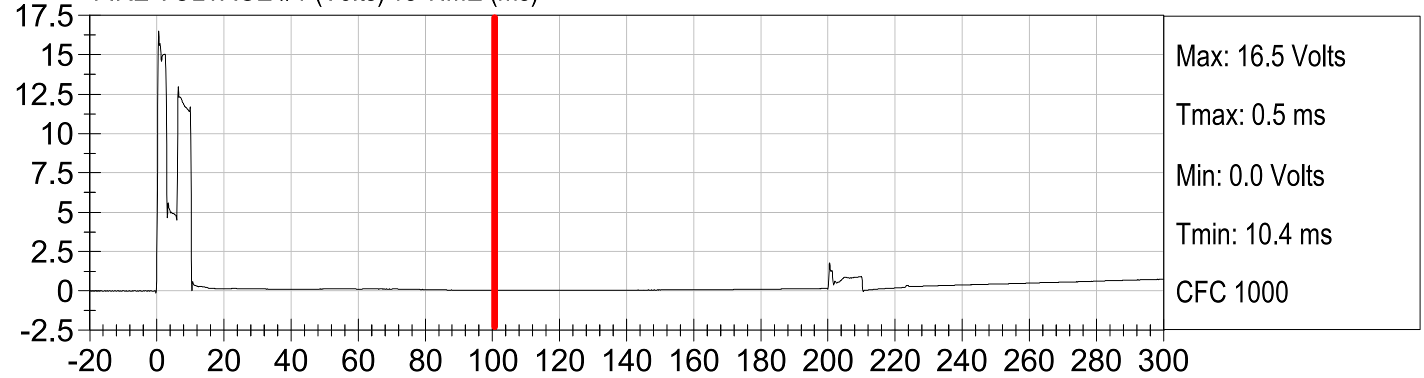
Due to a dummy grounding problem, this data is included for information purposes only.

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

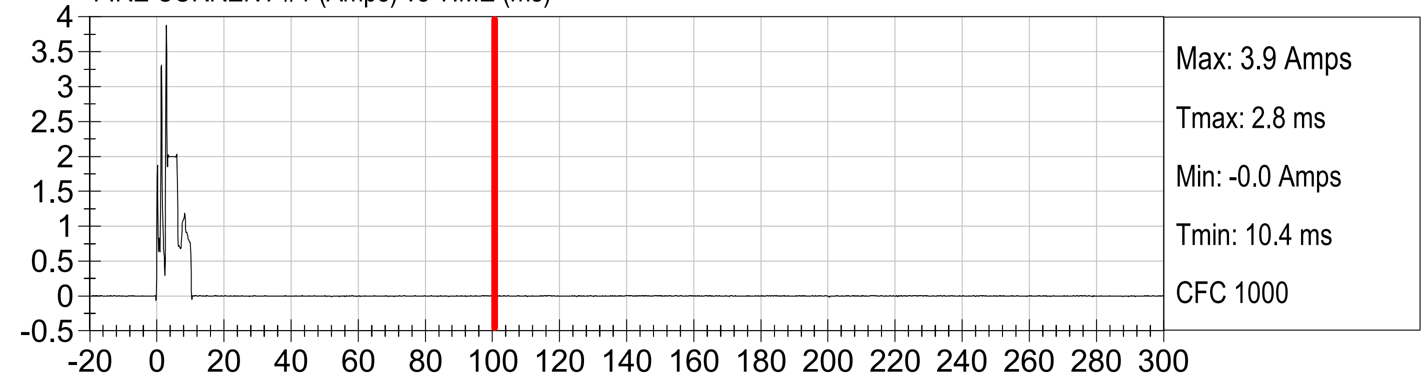
Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

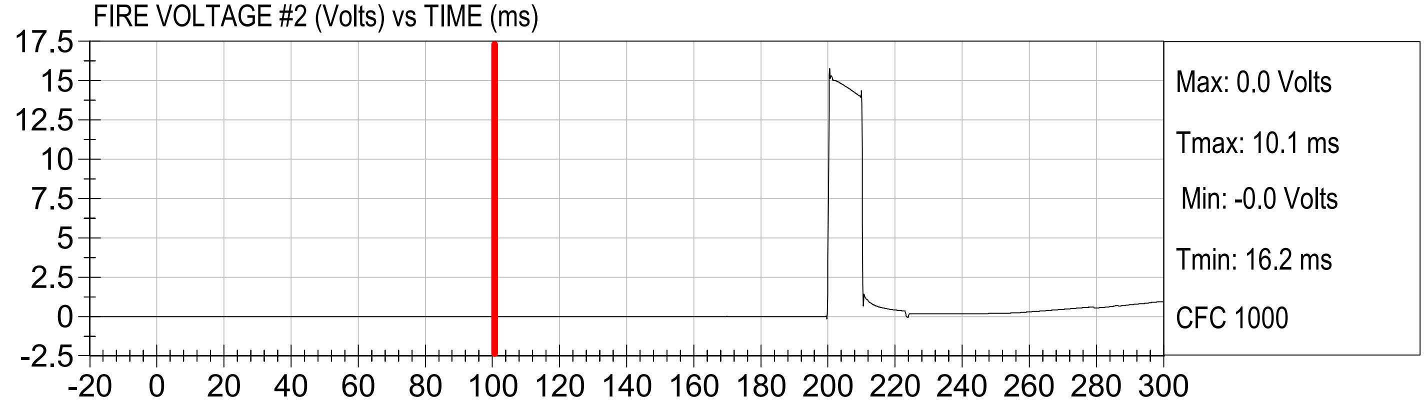
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



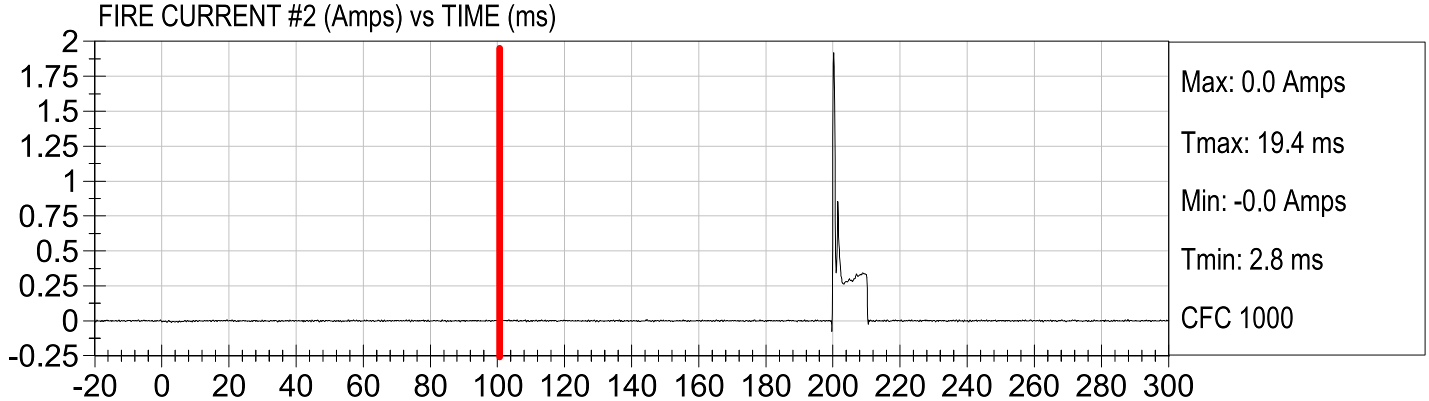
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



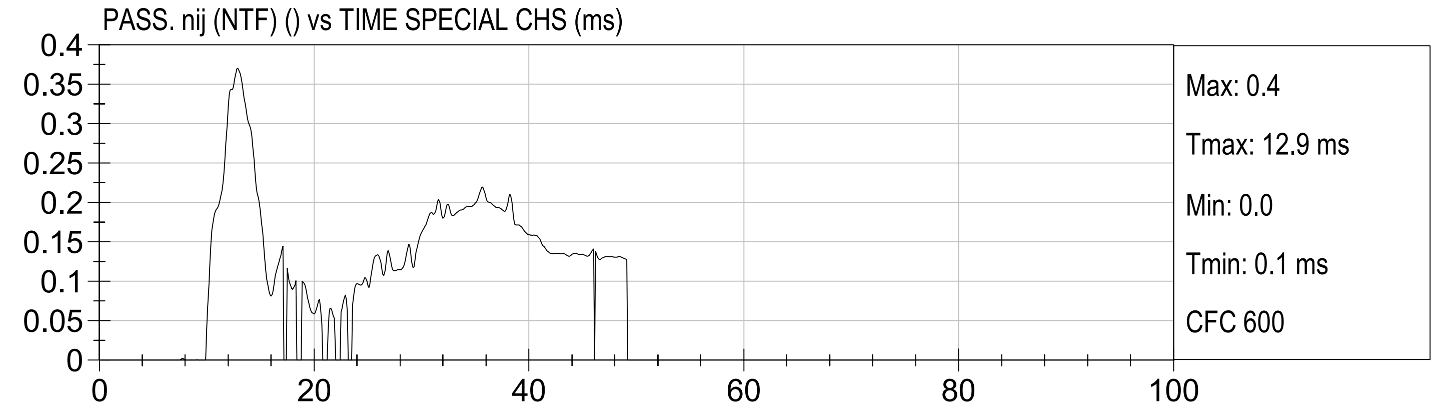
FIRE CURRENT #2 (Amps) vs TIME (ms)

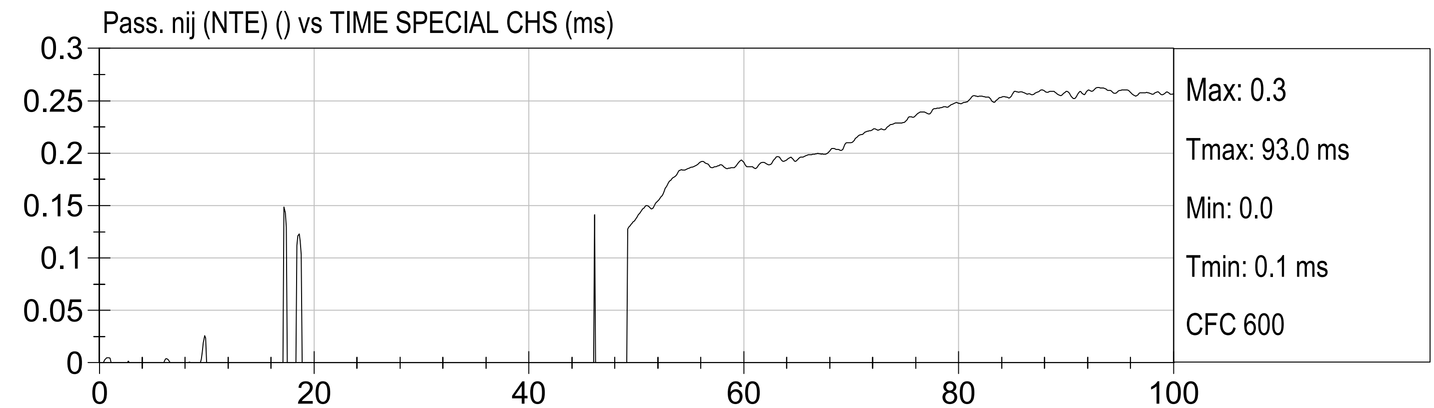


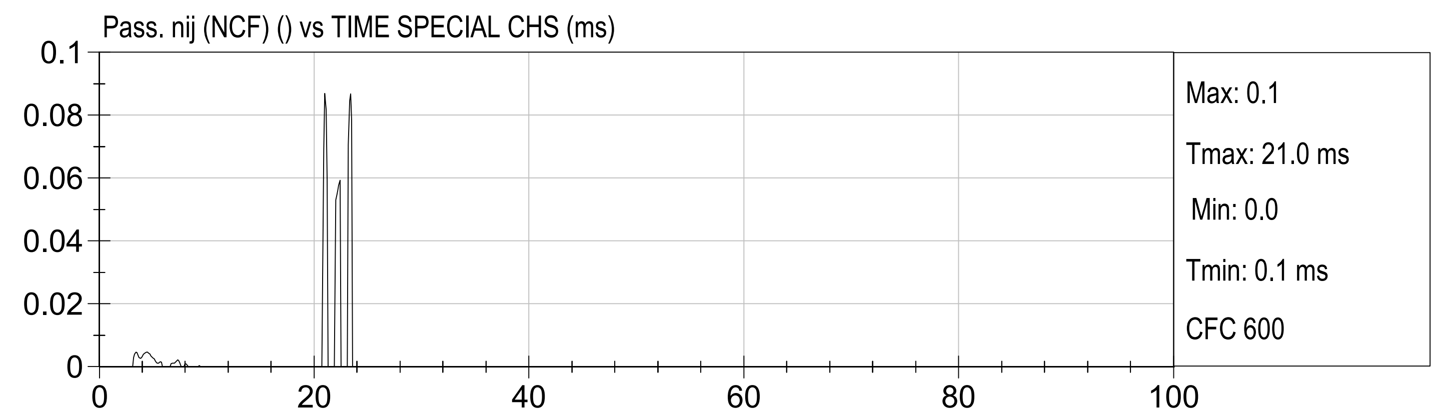
Due to a dummy grounding problem, this data is included for information purposes only.

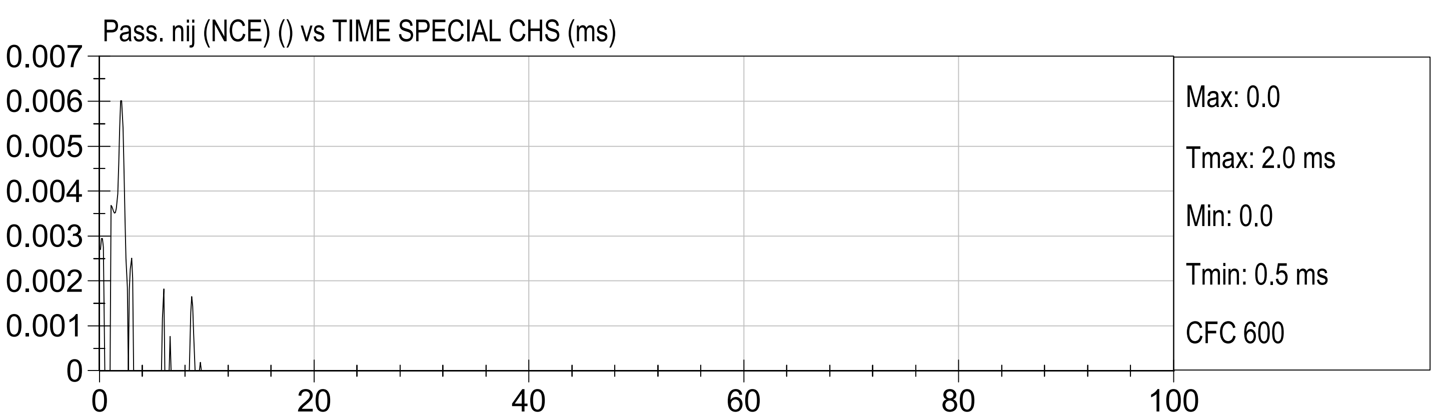
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P1)

Test Date: 02/15/06
Speed: 0.0 mph (0.0 km/h)





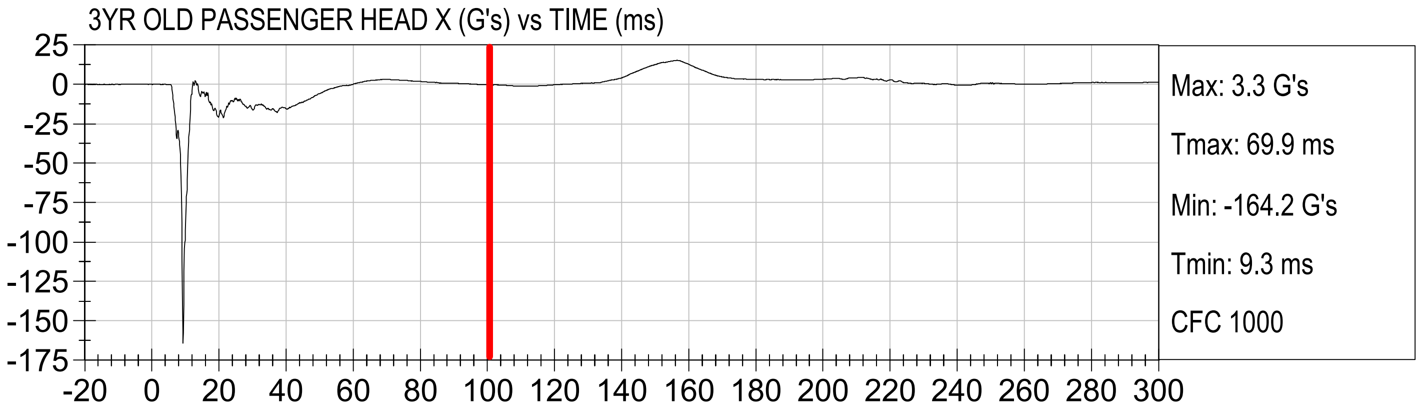


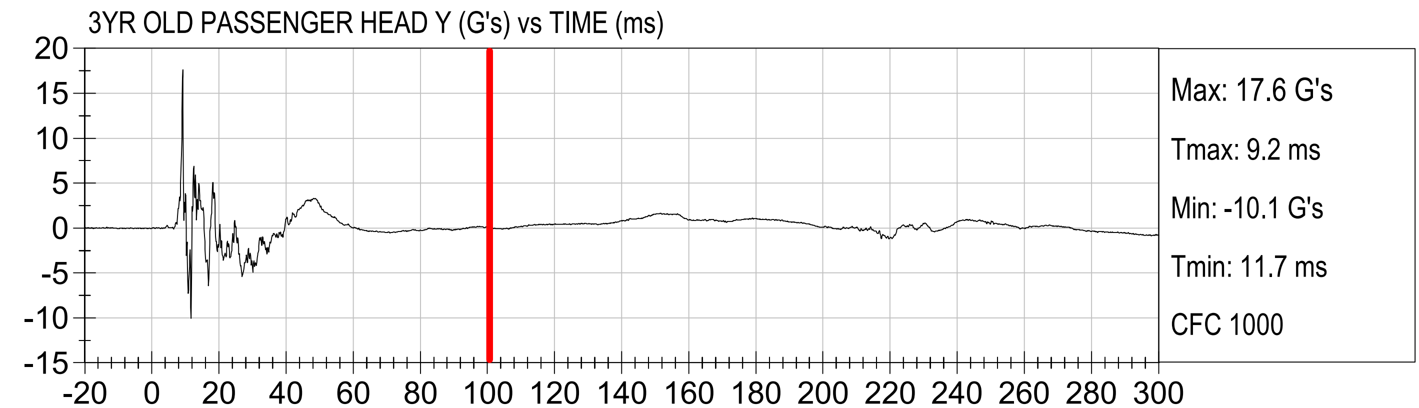


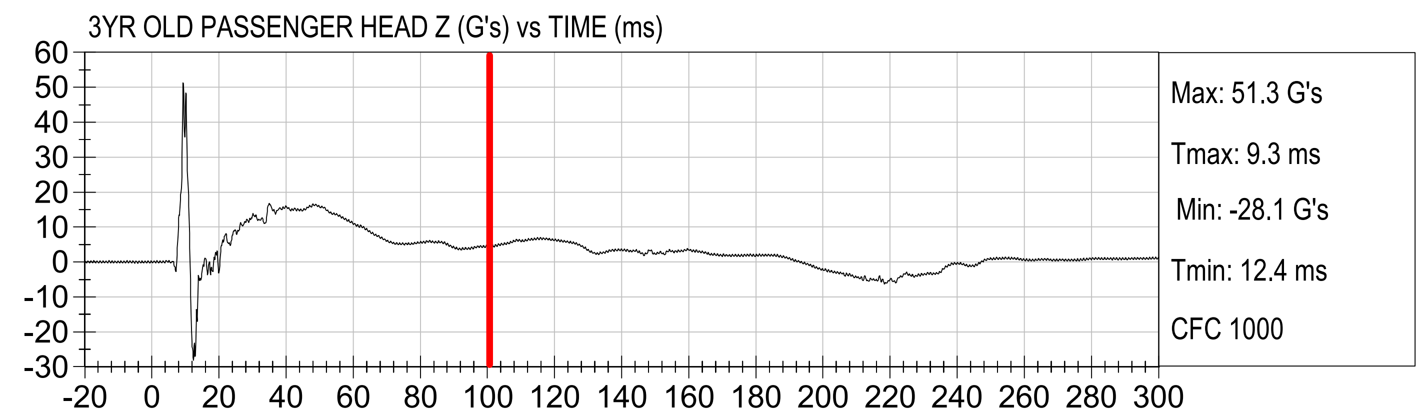
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

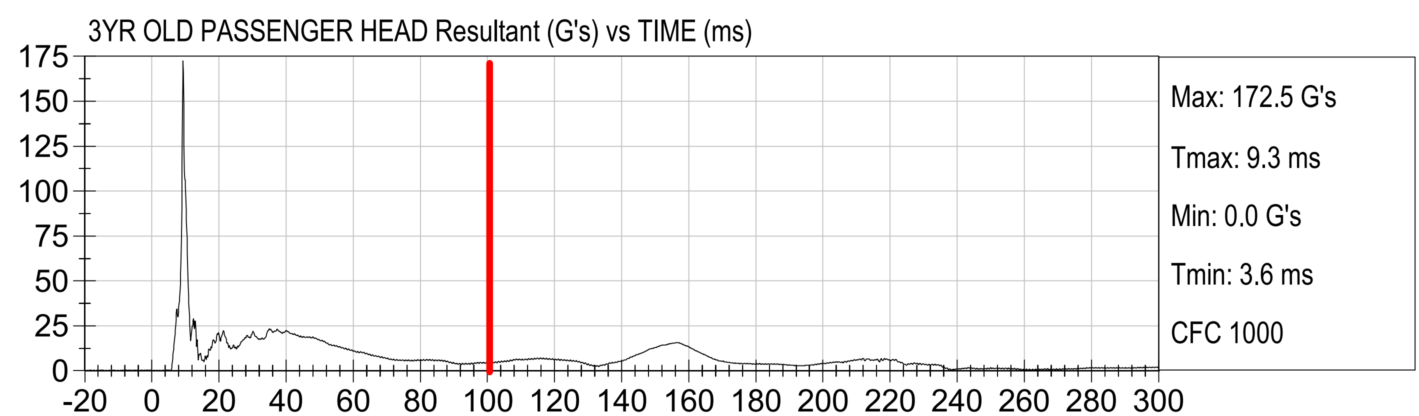
Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

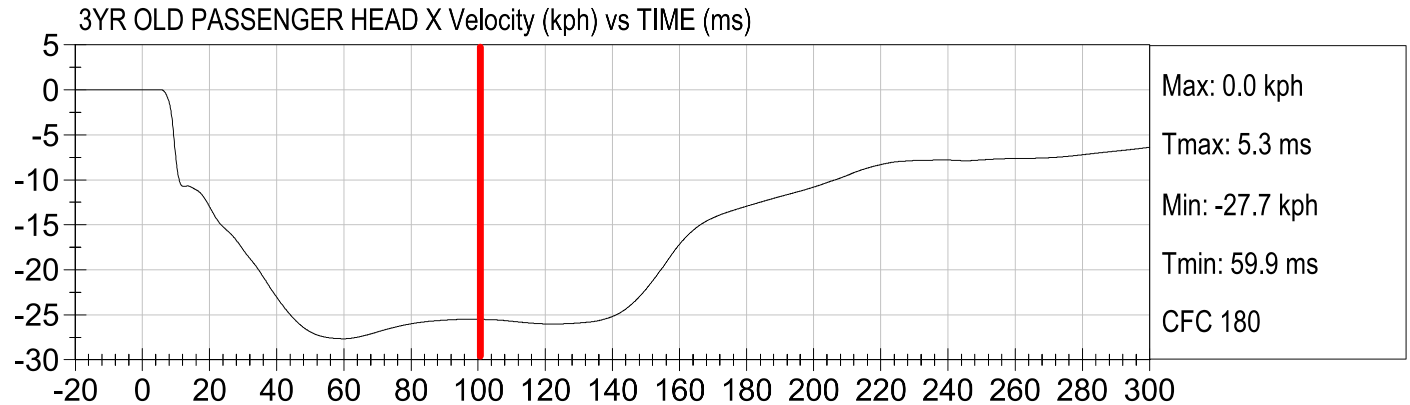


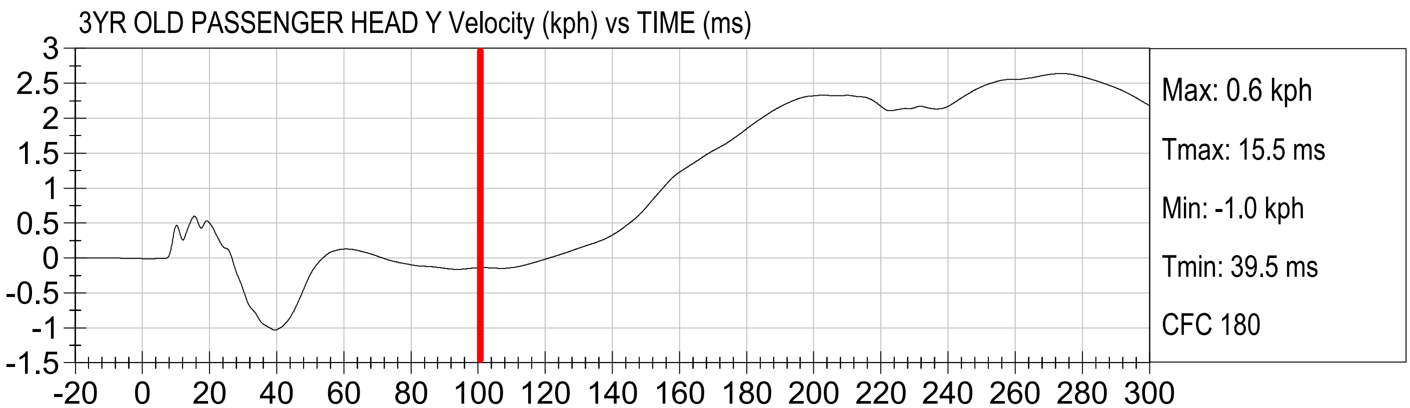


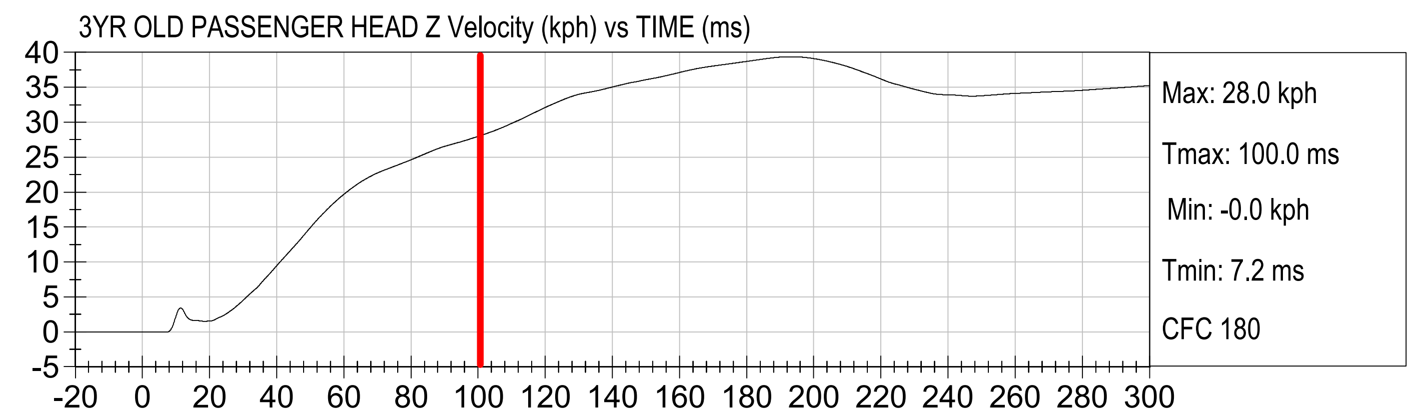




Injury Values Calculated between 0ms and 100ms





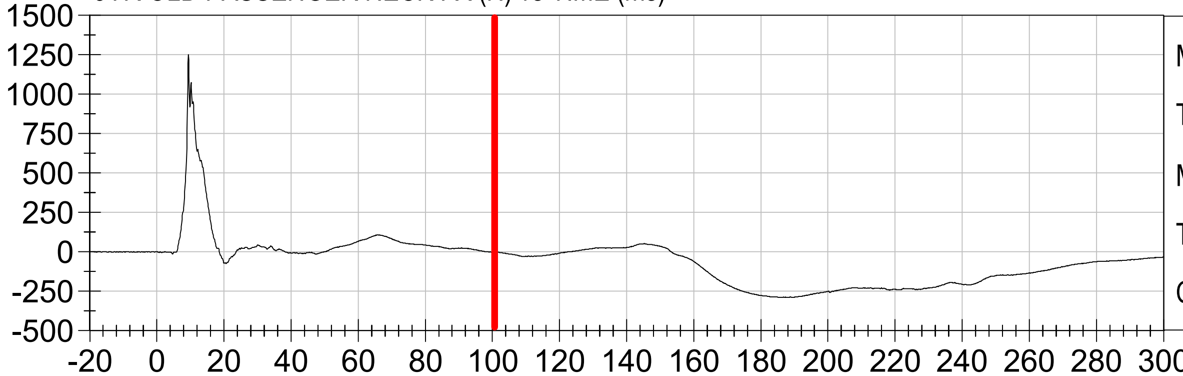


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

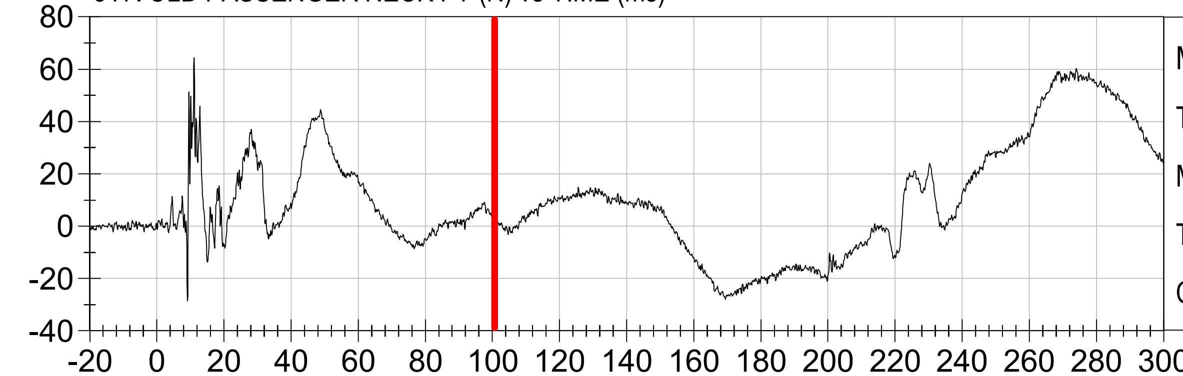
Injury Values Calculated between 0ms and 100ms

3YR OLD PASSENGER NECK FX (N) vs TIME (ms)



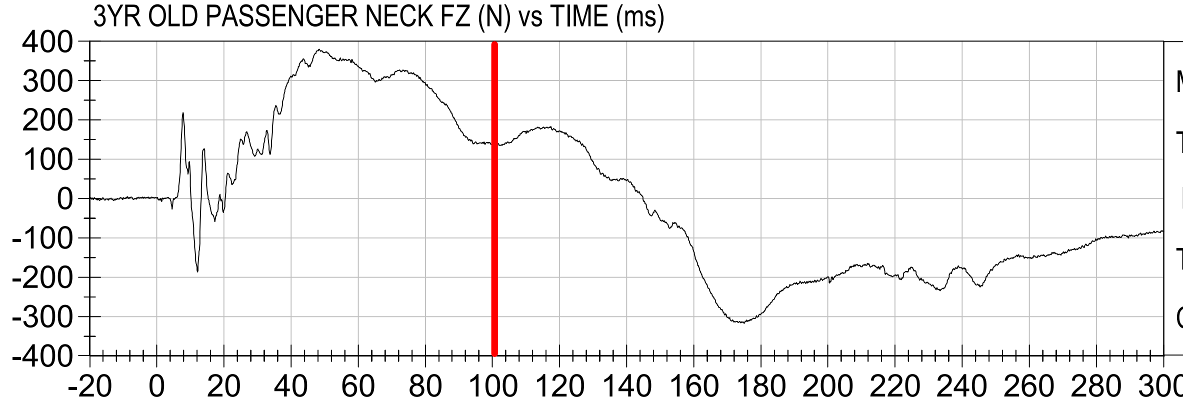
Max: 1252.8 N
Tmax: 9.4 ms
Min: -73.6 N
Tmin: 20.6 ms
CFC 1000

3YR OLD PASSENGER NECK FY (N) vs TIME (ms)



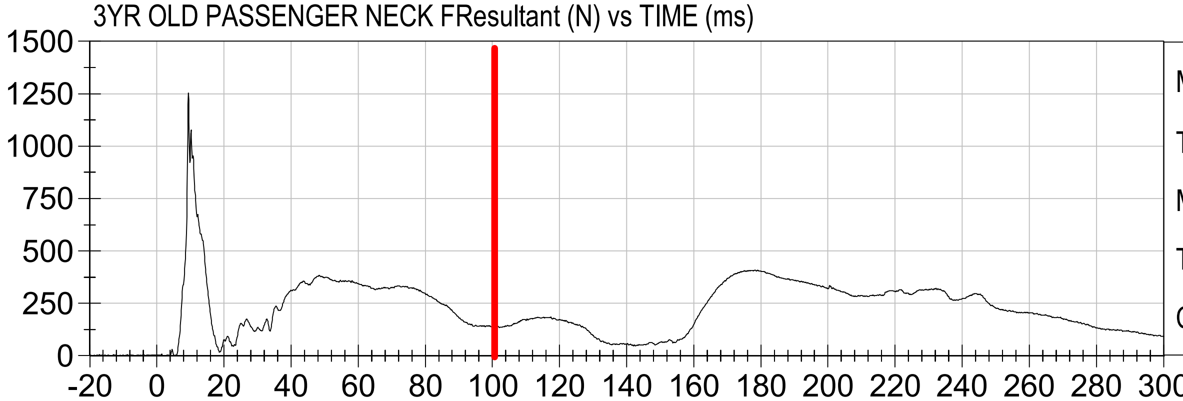
Max: 64.4 N
Tmax: 11.1 ms
Min: -28.6 N
Tmin: 9.1 ms
CFC 1000

3YR OLD PASSENGER NECK FZ (N) vs TIME (ms)



Max: 380.3 N
Tmax: 48.3 ms
Min: -186.5 N
Tmin: 12.1 ms
CFC 1000

3YR OLD PASSENGER NECK FResultant (N) vs TIME (ms)



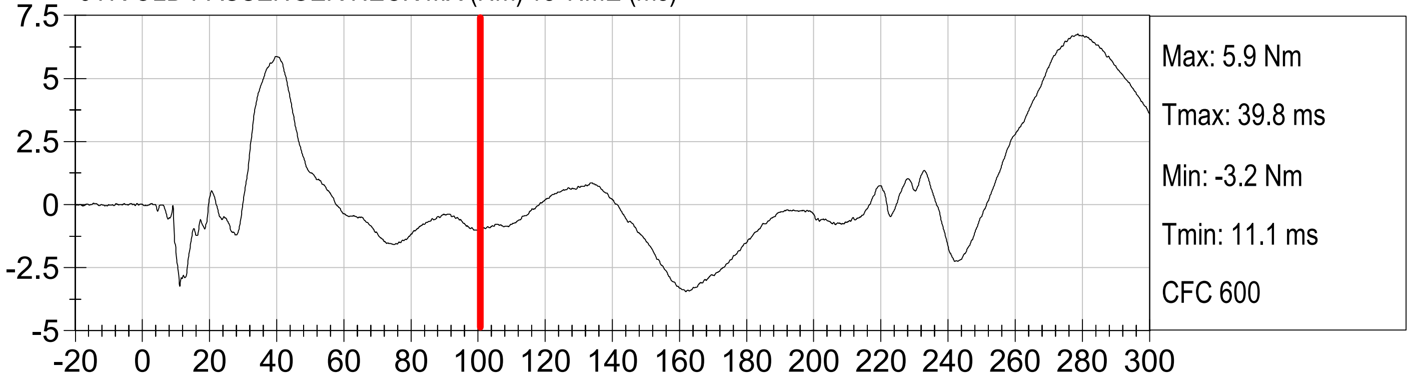
Max: 1254.9 N
Tmax: 9.4 ms
Min: 0.5 N
Tmin: 1.1 ms
CFC 1000

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

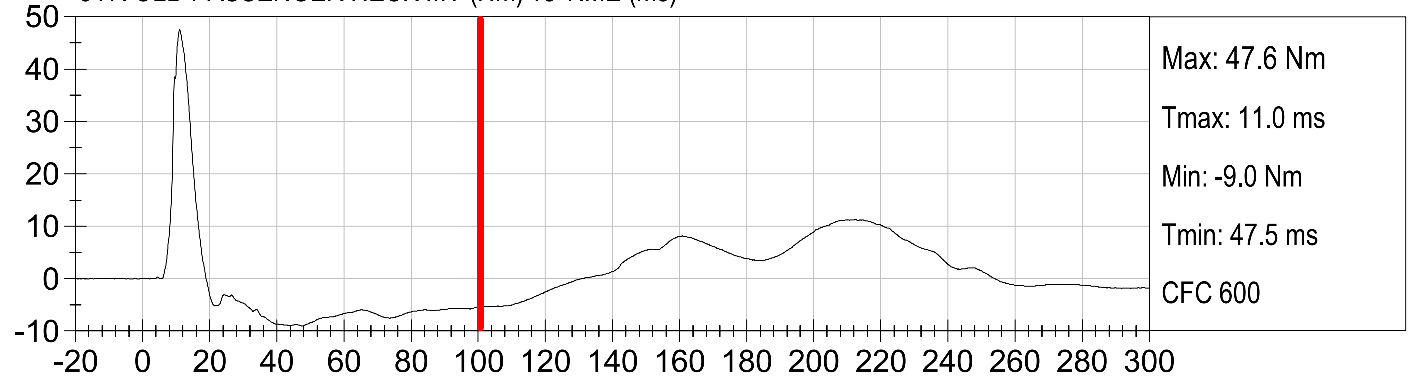
Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

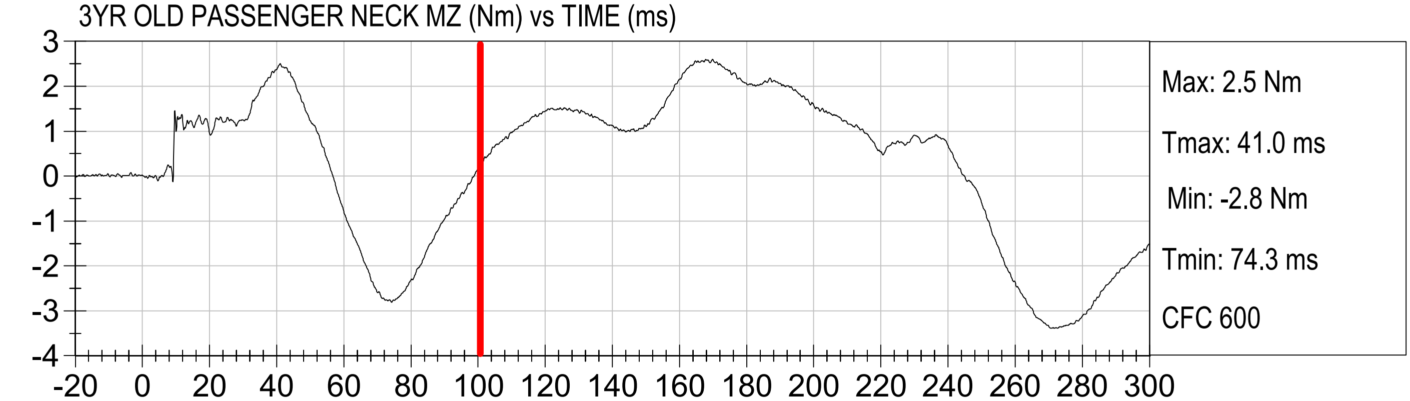
3YR OLD PASSENGER NECK MX (Nm) vs TIME (ms)



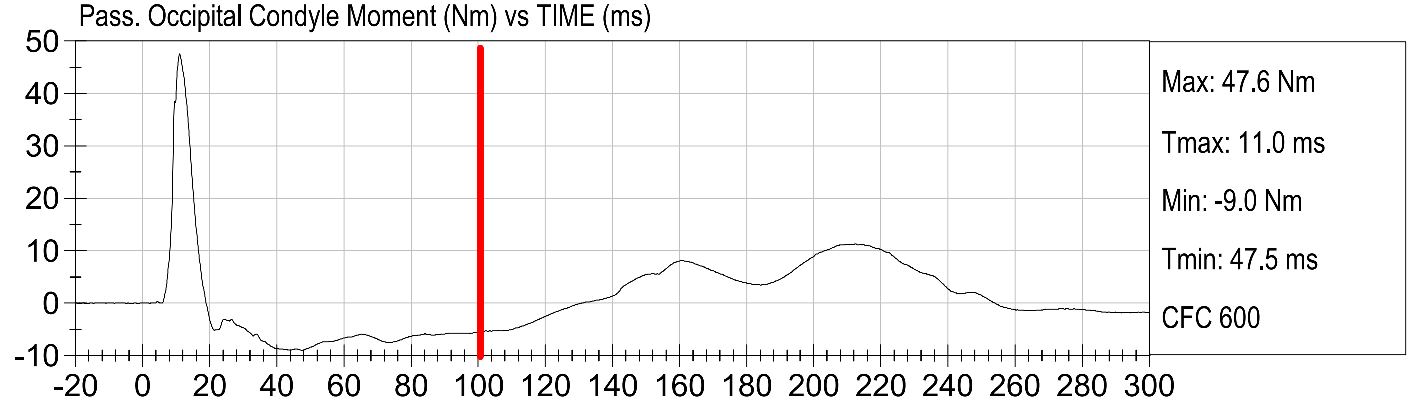
3YR OLD PASSENGER NECK MY (Nm) vs TIME (ms)



3YR OLD PASSENGER NECK MZ (Nm) vs TIME (ms)



Pass. Occipital Condyle Moment (Nm) vs TIME (ms)

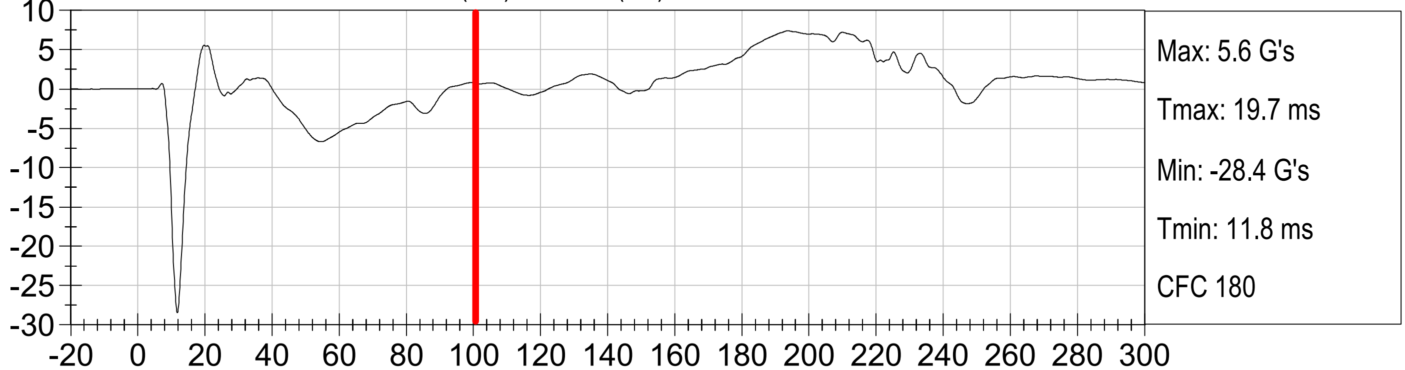


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

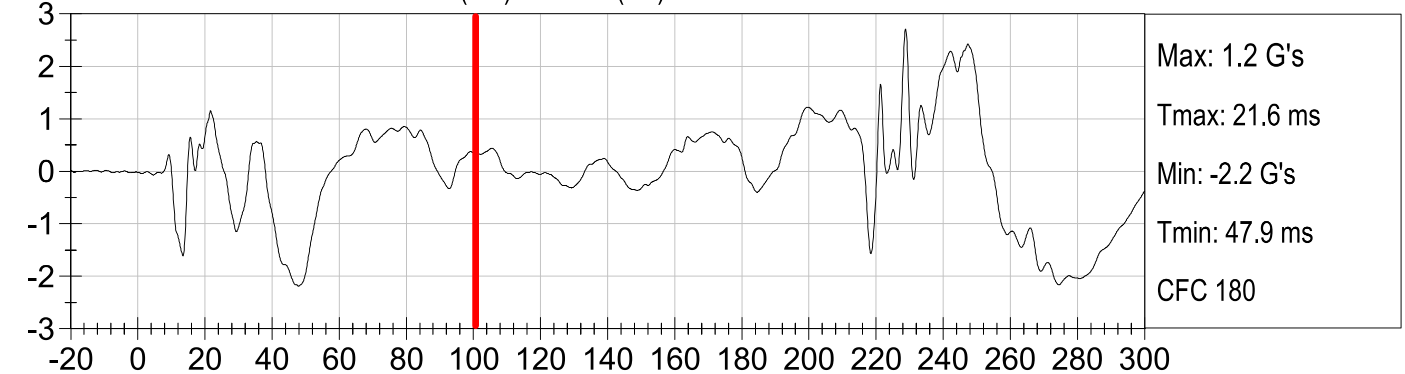
Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

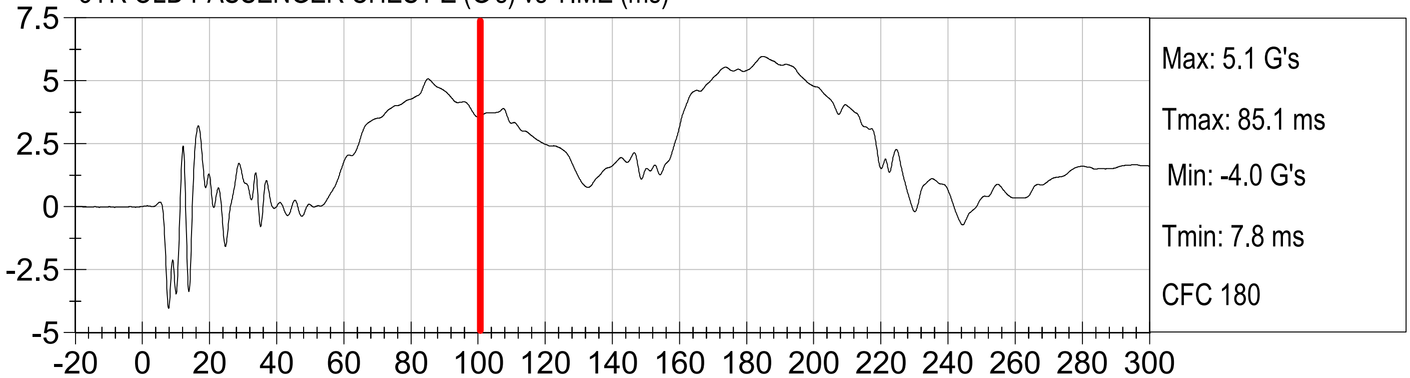
3YR OLD PASSENGER CHEST X (G's) vs TIME (ms)



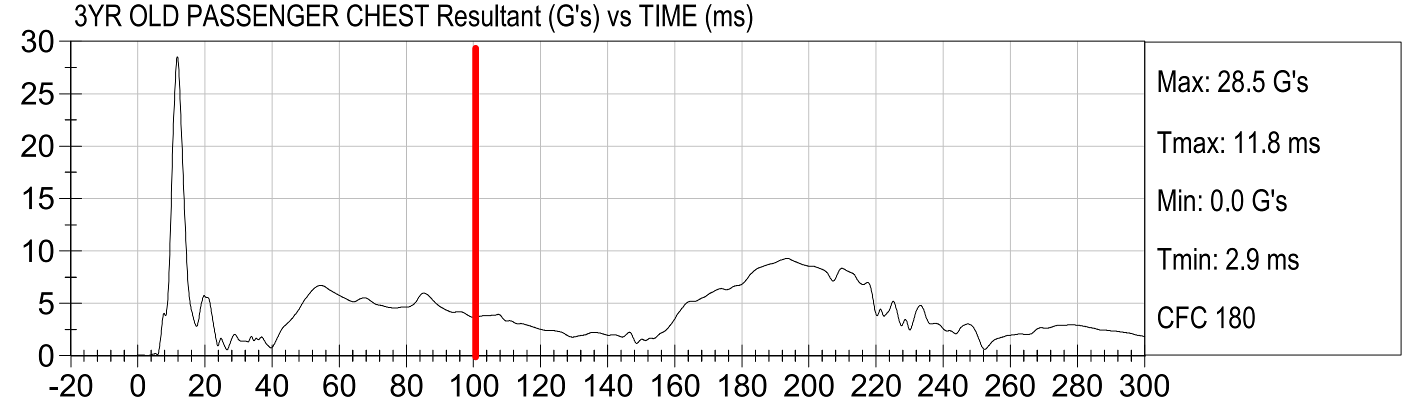
3YR OLD PASSENGER CHEST Y (G's) vs TIME (ms)



3YR OLD PASSENGER CHEST Z (G's) vs TIME (ms)



3YR OLD PASSENGER CHEST Resultant (G's) vs TIME (ms)

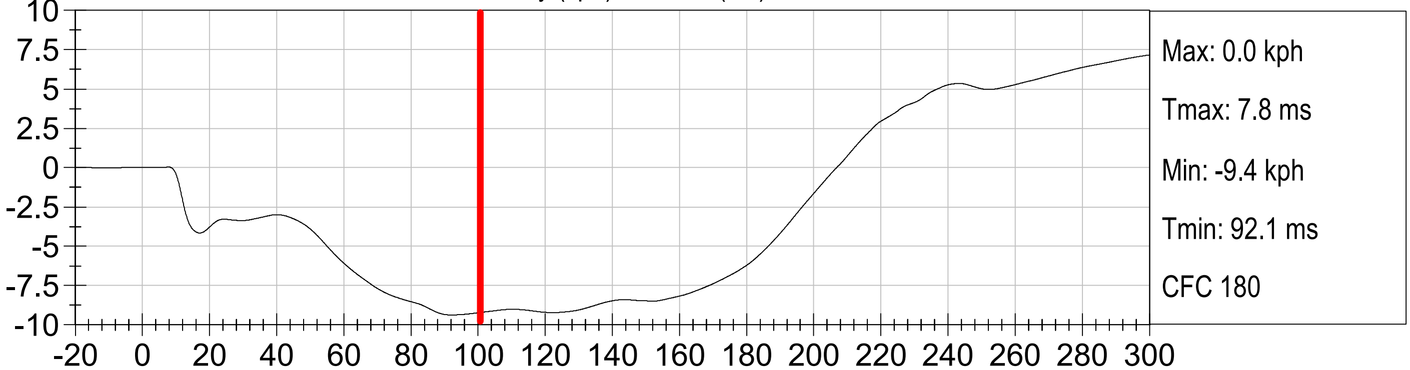


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

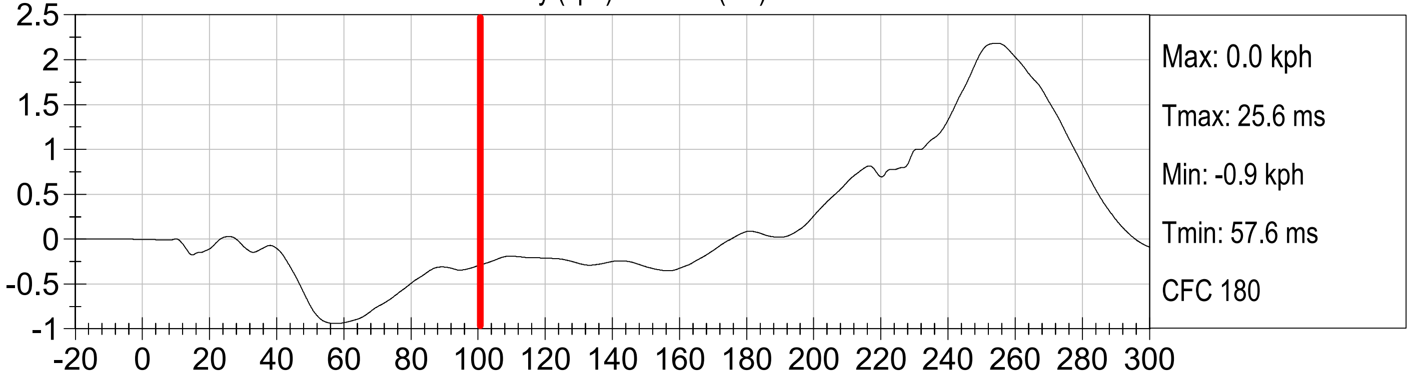
Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

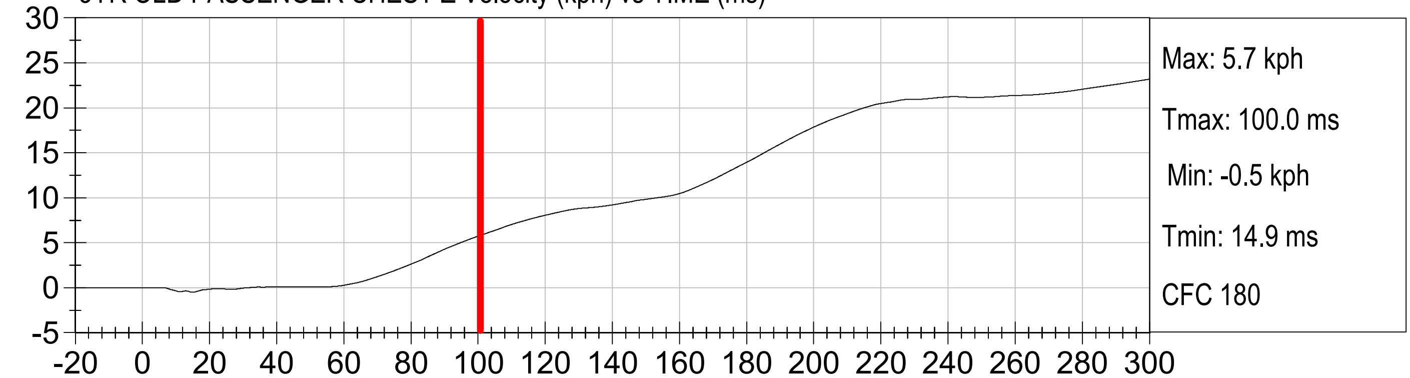
3YR OLD PASSENGER CHEST X Velocity (kph) vs TIME (ms)



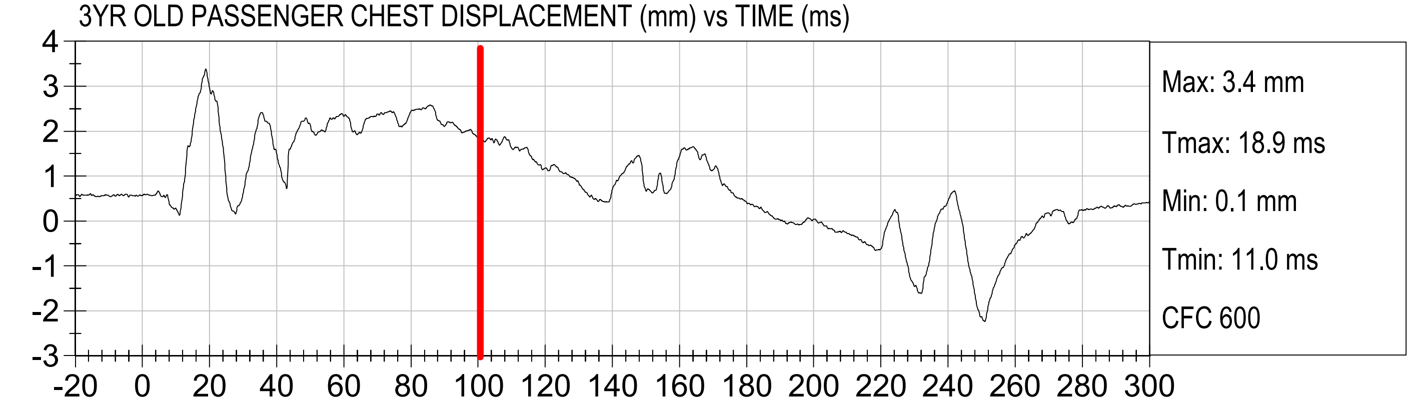
3YR OLD PASSENGER CHEST Y Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER CHEST Z Velocity (kph) vs TIME (ms)



3YR OLD PASSENGER CHEST DISPLACEMENT (mm) vs TIME (ms)

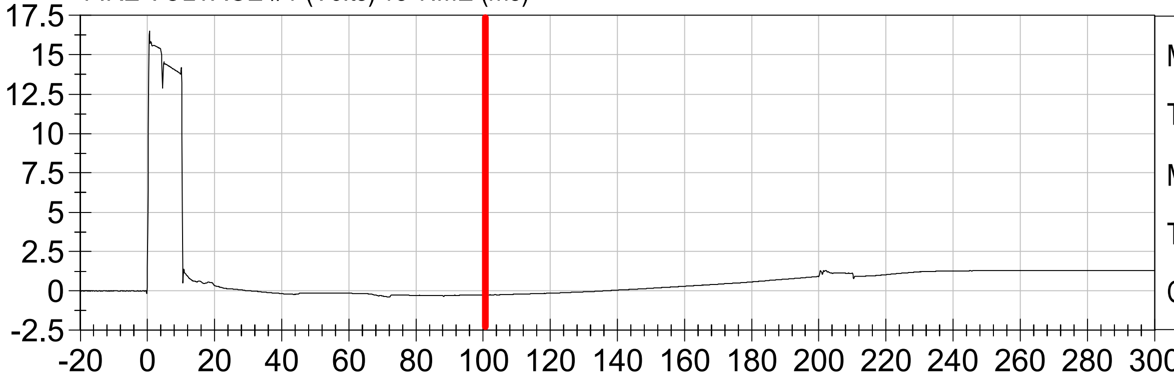


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

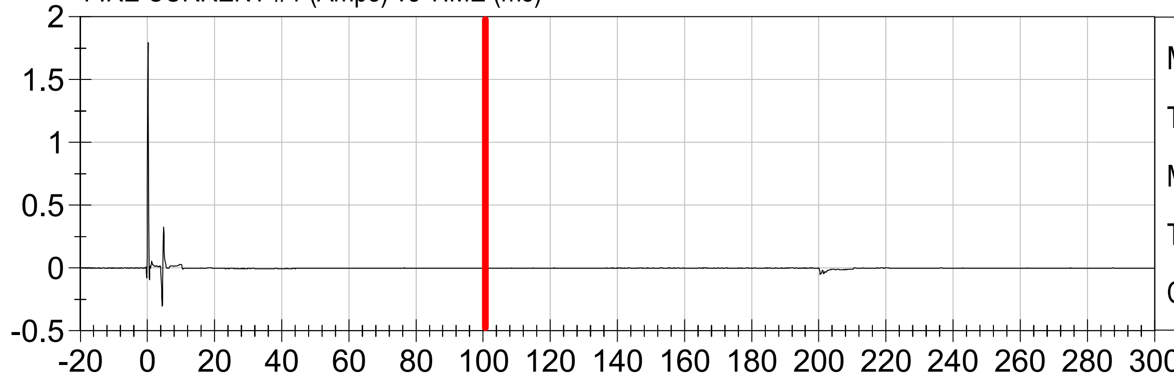
Injury Values Calculated between 0ms and 100ms

FIRE VOLTAGE #1 (Volts) vs TIME (ms)



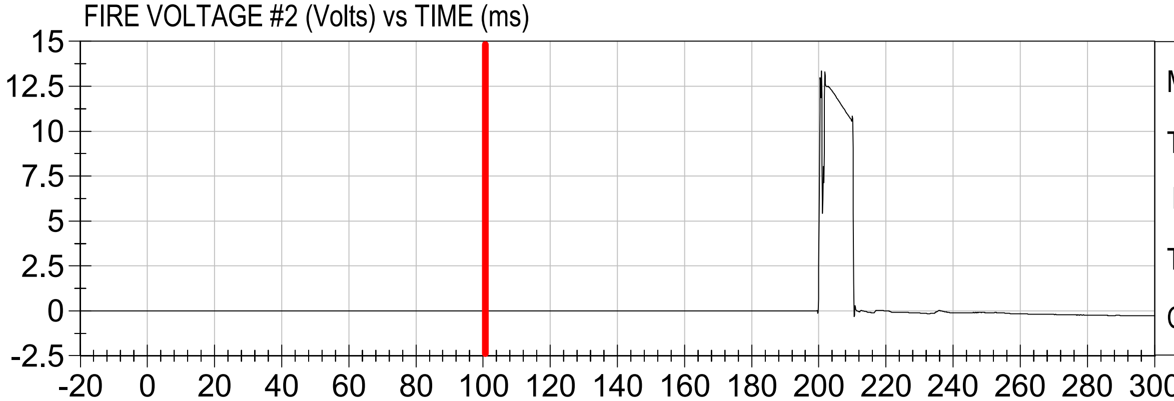
Max: 16.5 Volts
Tmax: 0.6 ms
Min: -0.4 Volts
Tmin: 72.1 ms
CFC 1000

FIRE CURRENT #1 (Amps) vs TIME (ms)



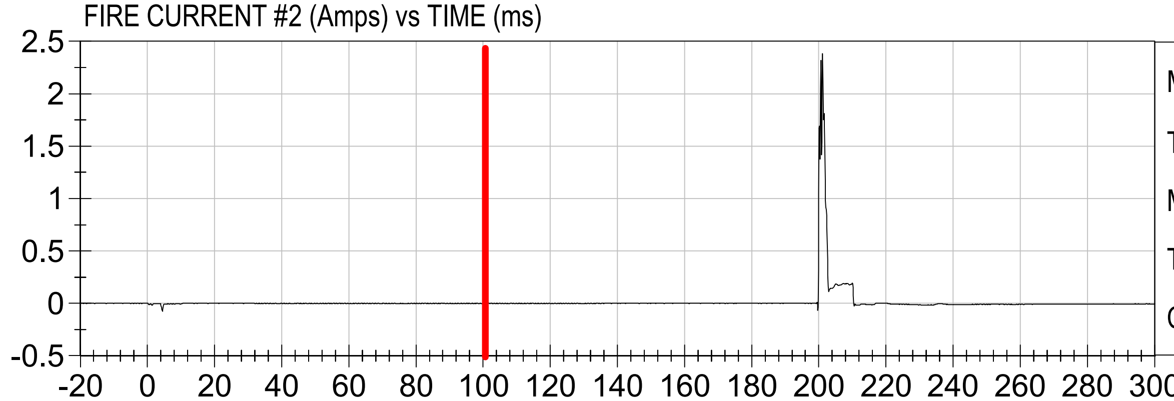
Max: 1.8 Amps
Tmax: 0.2 ms
Min: -0.3 Amps
Tmin: 4.4 ms
CFC 1000

FIRE VOLTAGE #2 (Volts) vs TIME (ms)



Max: 0.0 Volts
Tmax: 95.5 ms
Min: -0.0 Volts
Tmin: 69.9 ms
CFC 1000

FIRE CURRENT #2 (Amps) vs TIME (ms)

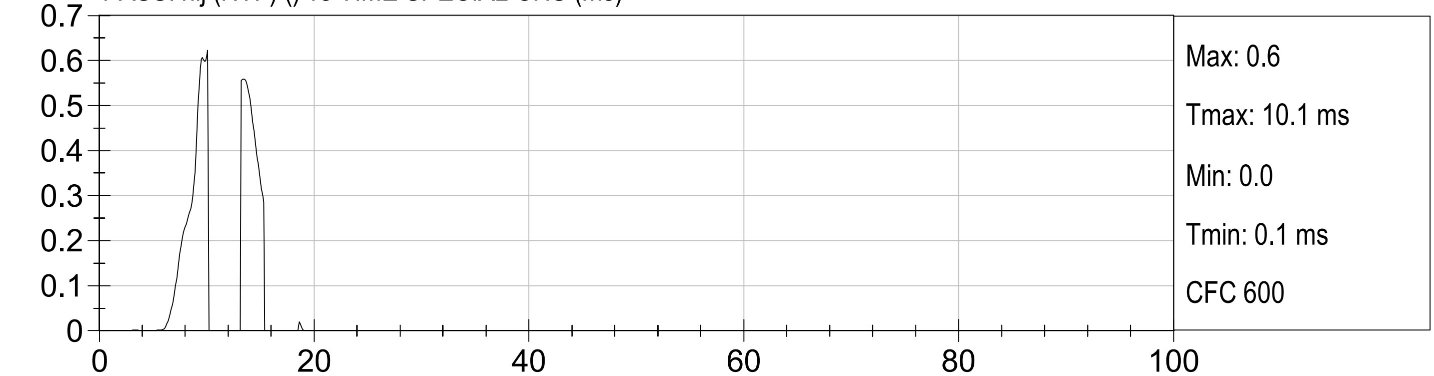


Max: 0.0 Amps
Tmax: 12.6 ms
Min: -0.1 Amps
Tmin: 4.5 ms
CFC 1000

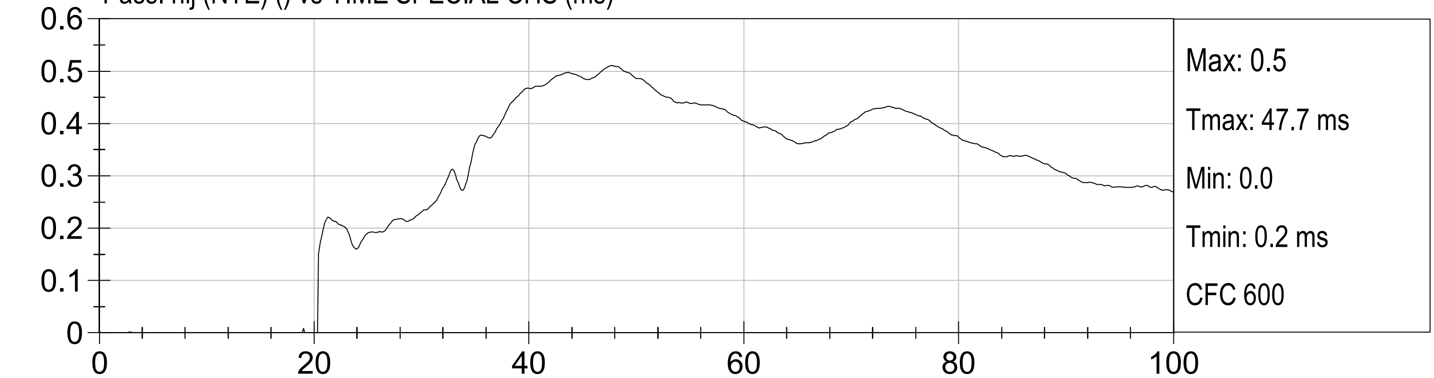
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (3YO P2)

Test Date: 06/07/06
Speed: 0.0 mph (0.0 km/h)

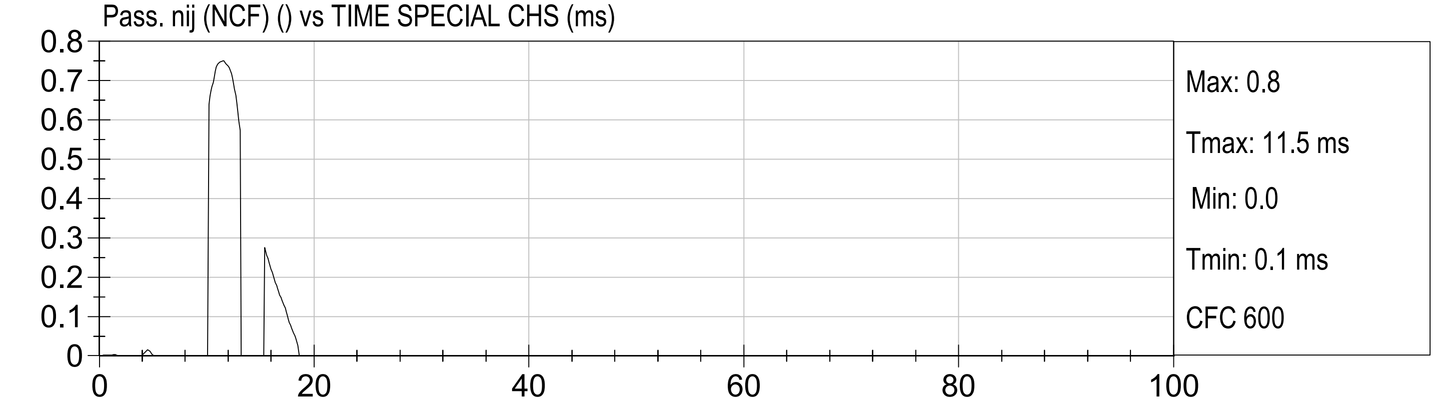
PASS. nij (NTF) () vs TIME SPECIAL CHS (ms)



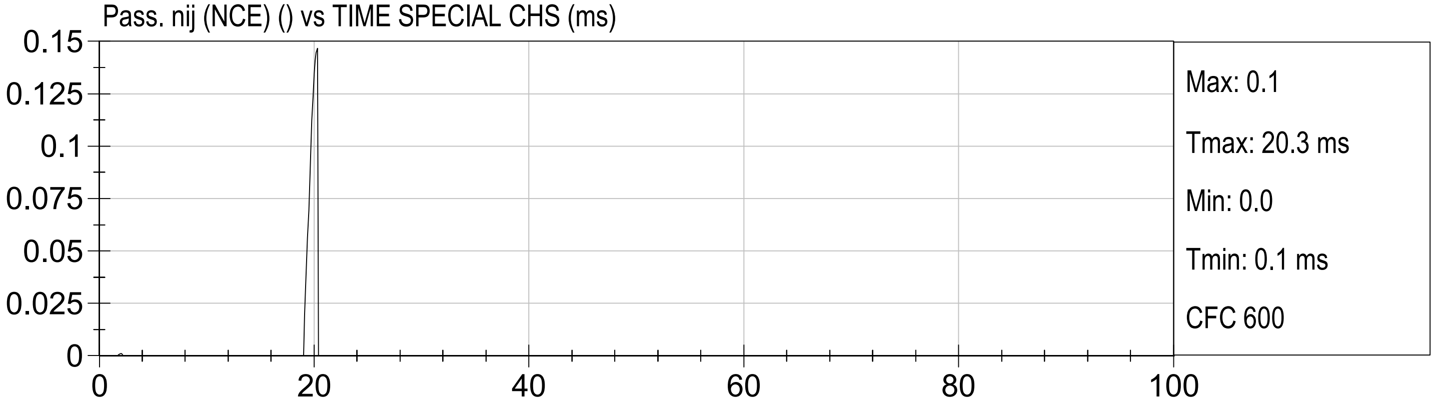
Pass. nij (NTE) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCF) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCE) () vs TIME SPECIAL CHS (ms)

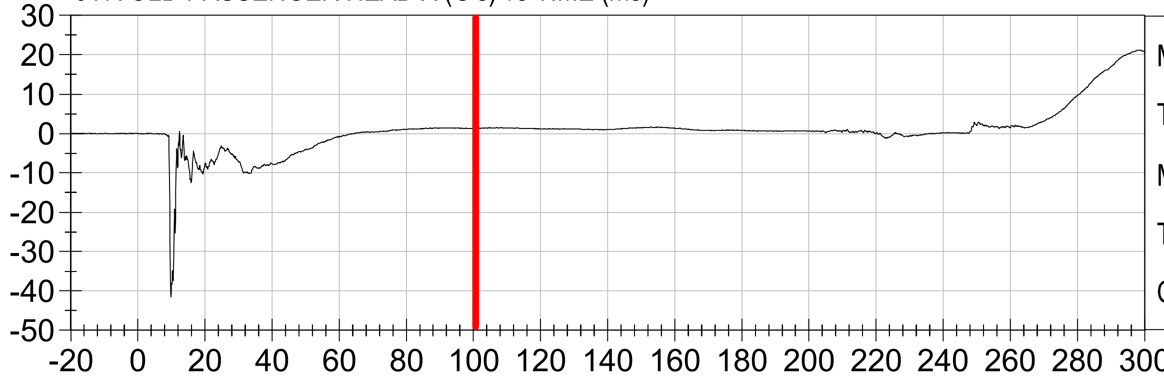


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

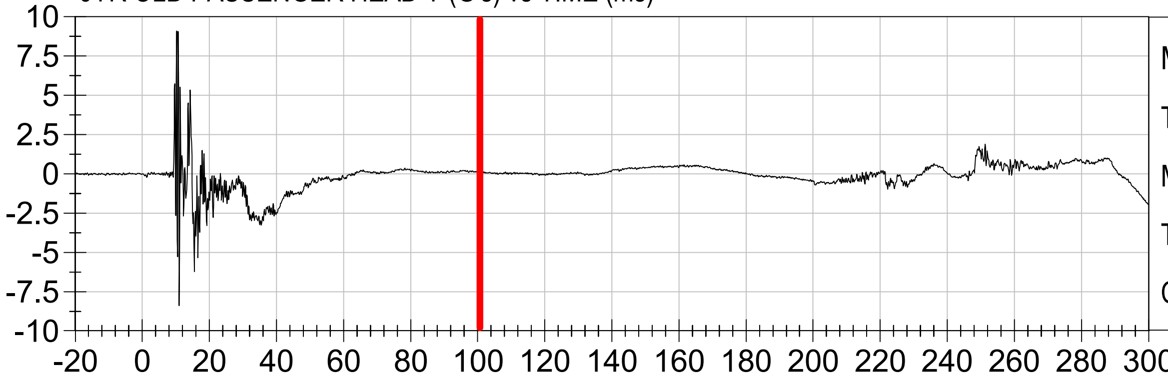
Injury Values Calculated between 0ms and 100ms

6YR OLD PASSENGER HEAD X (G's) vs TIME (ms)



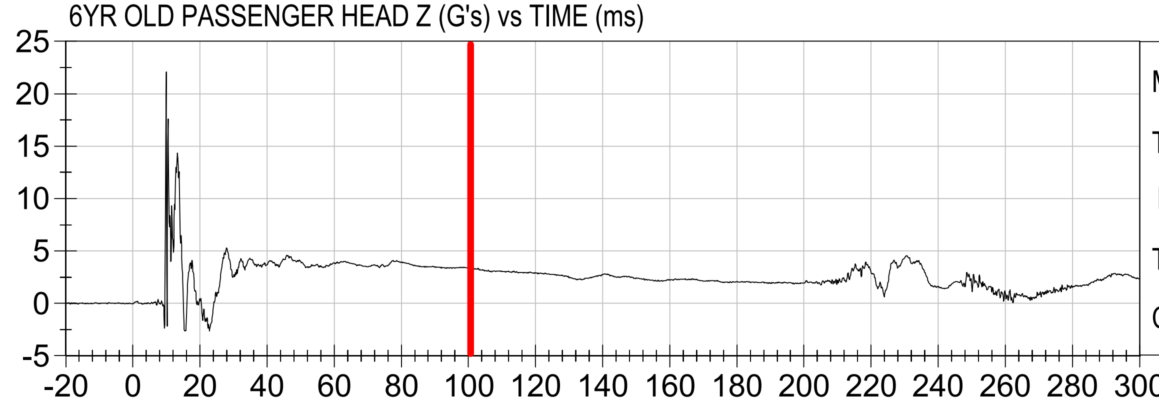
Max: 1.5 G's
Tmax: 93.3 ms
Min: -41.6 G's
Tmin: 9.8 ms
CFC 1000

6YR OLD PASSENGER HEAD Y (G's) vs TIME (ms)



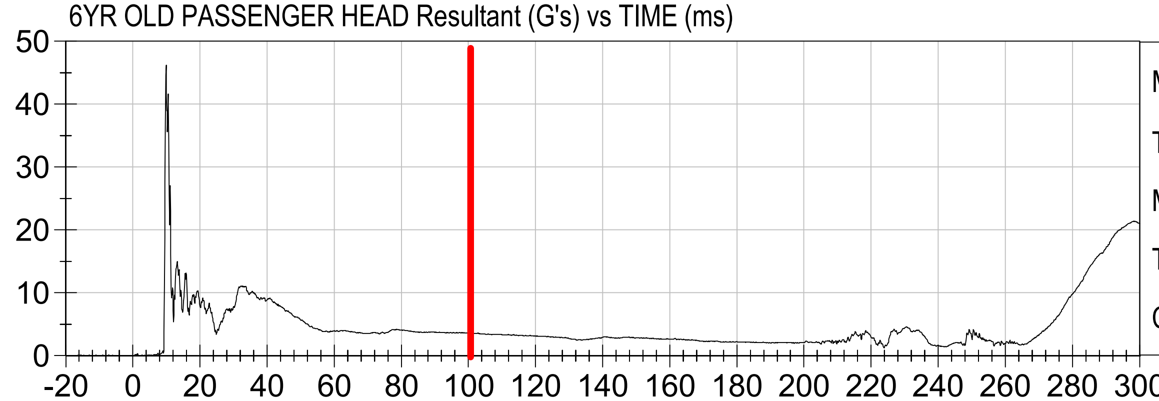
Max: 9.1 G's
Tmax: 10.2 ms
Min: -8.4 G's
Tmin: 11.0 ms
CFC 1000

6YR OLD PASSENGER HEAD Z (G's) vs TIME (ms)



Max: 22.1 G's
Tmax: 9.9 ms
Min: -2.6 G's
Tmin: 22.8 ms
CFC 1000

6YR OLD PASSENGER HEAD Resultant (G's) vs TIME (ms)

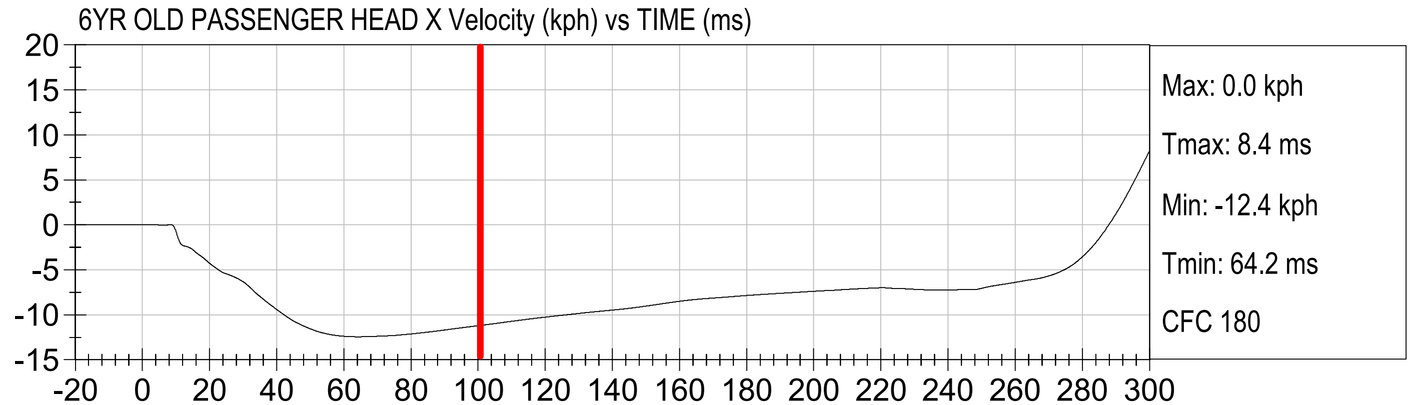


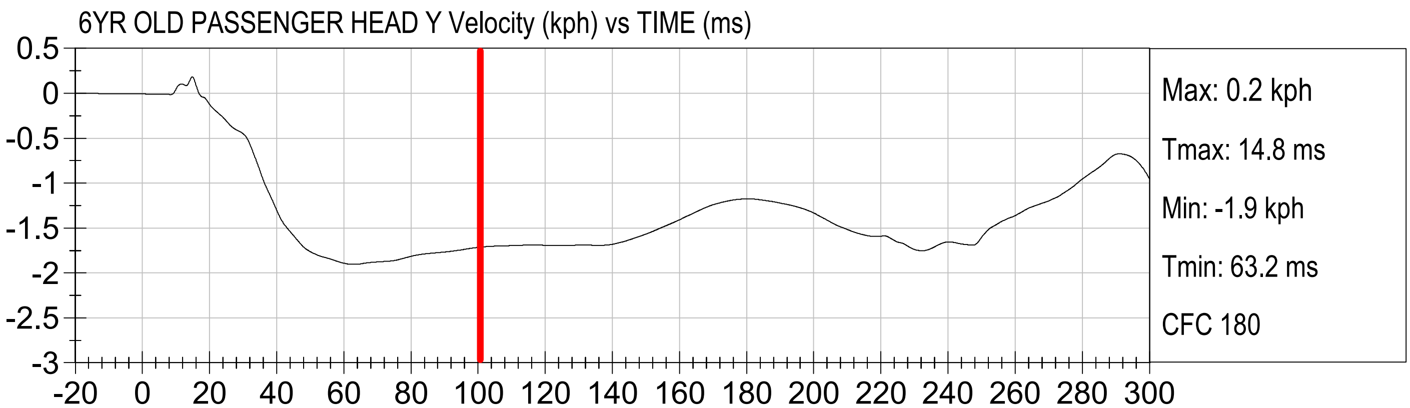
Max: 46.2 G's
Tmax: 9.9 ms
Min: 0.0 G's
Tmin: 0.3 ms
CFC 1000

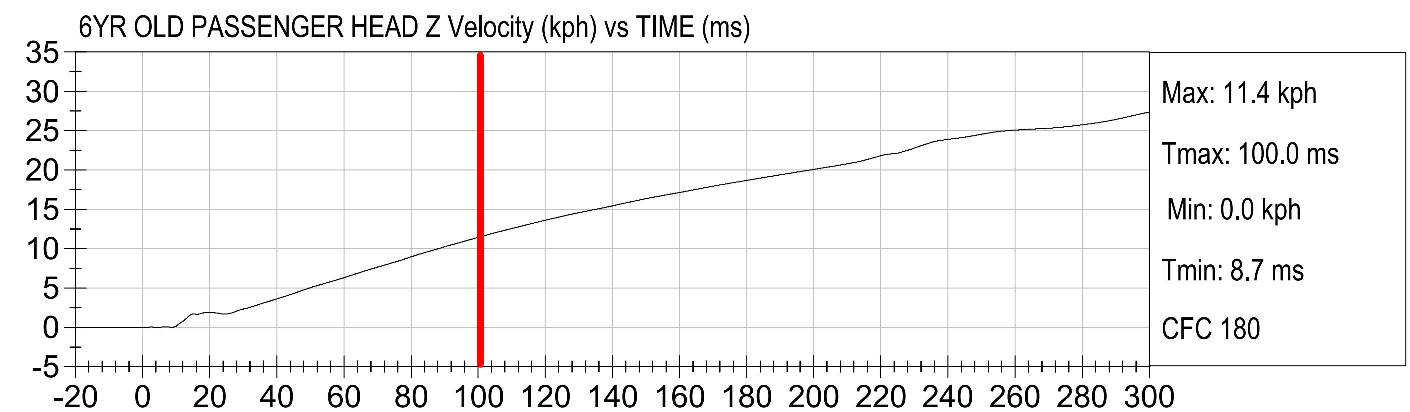
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms



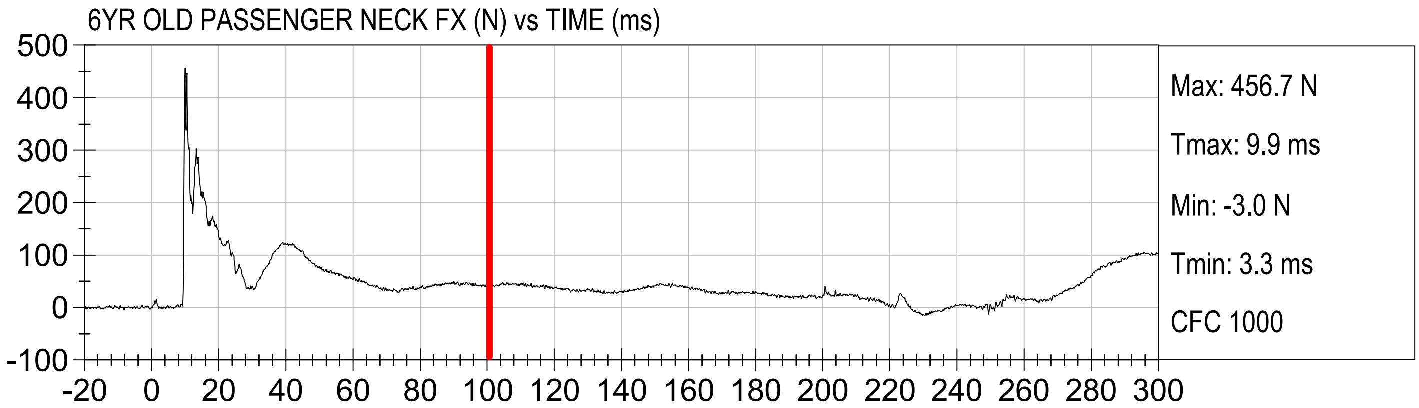


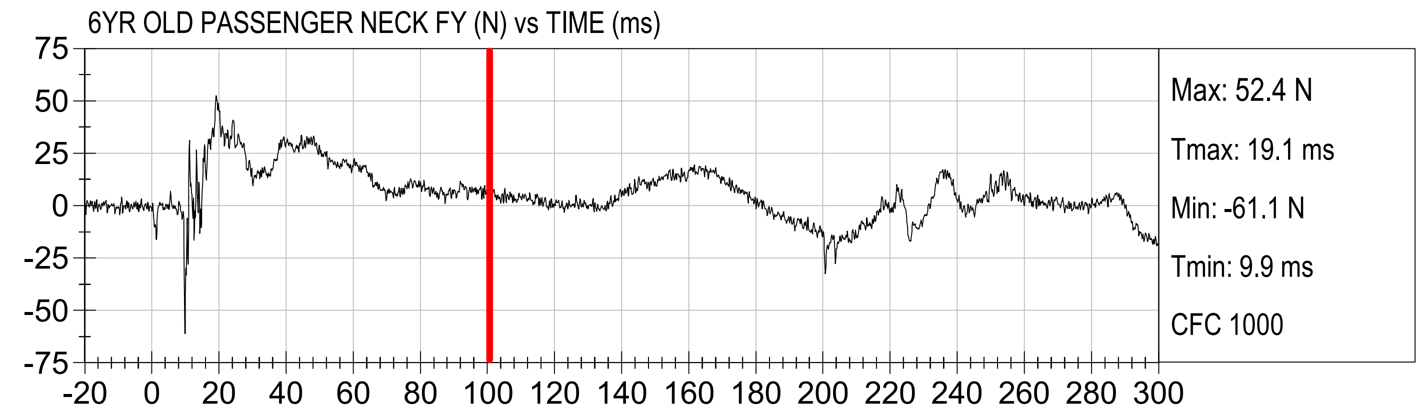


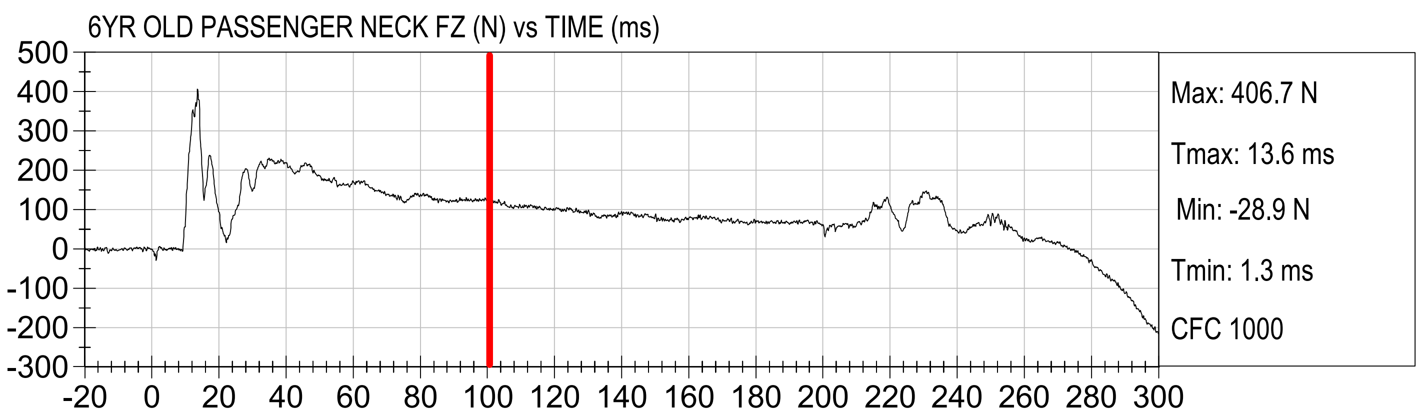
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

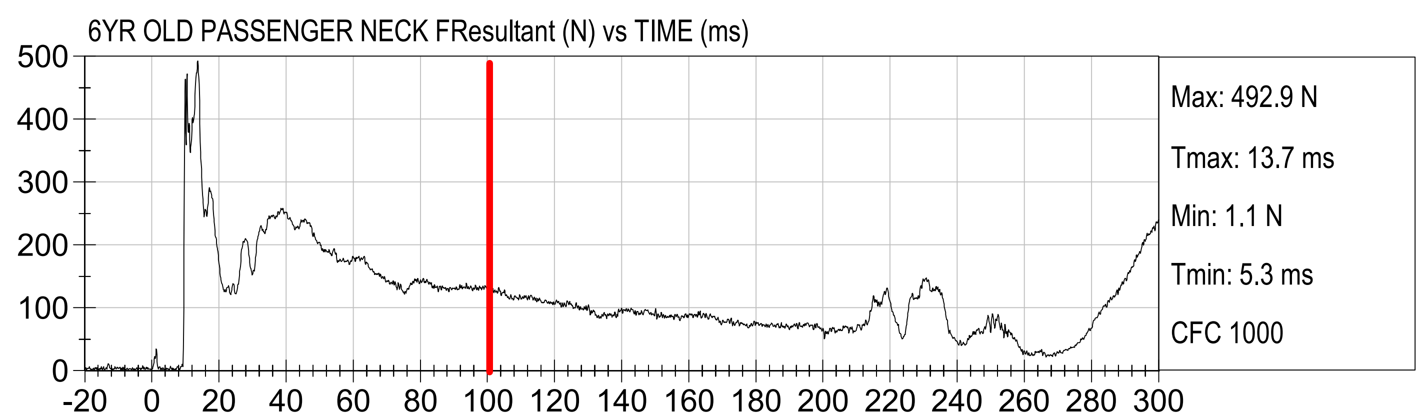
Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms







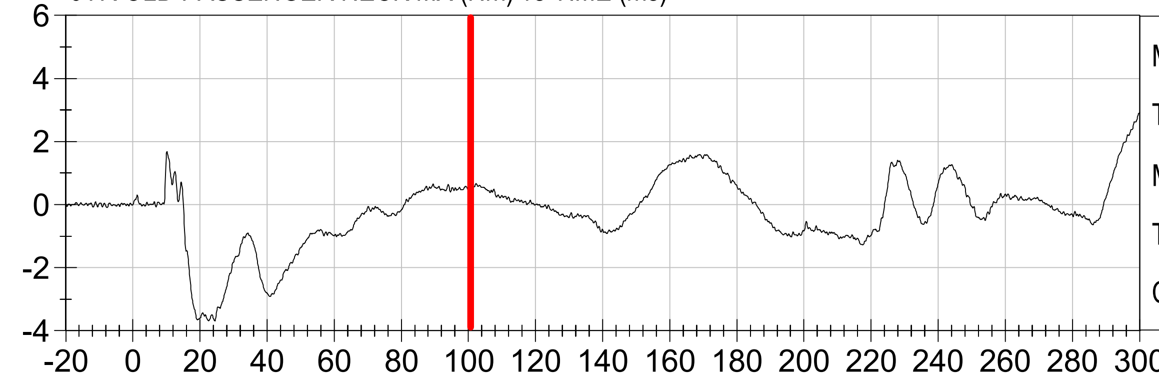


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

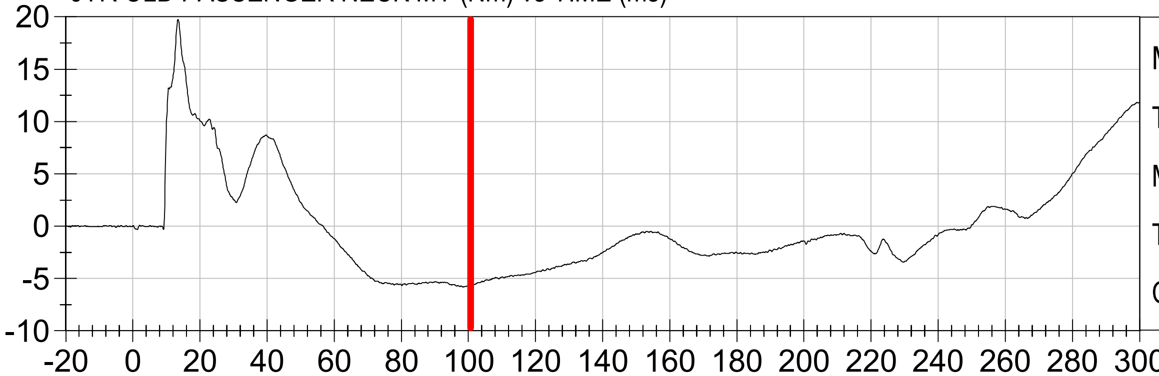
Injury Values Calculated between 0ms and 100ms

6YR OLD PASSENGER NECK MX (Nm) vs TIME (ms)



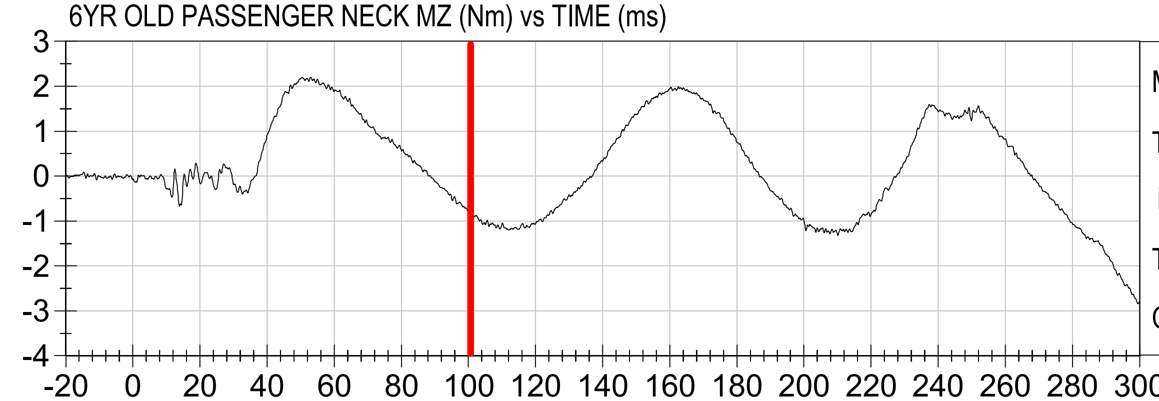
Max: 1.7 Nm
Tmax: 10.1 ms
Min: -3.7 Nm
Tmin: 24.4 ms
CFC 600

6YR OLD PASSENGER NECK MY (Nm) vs TIME (ms)



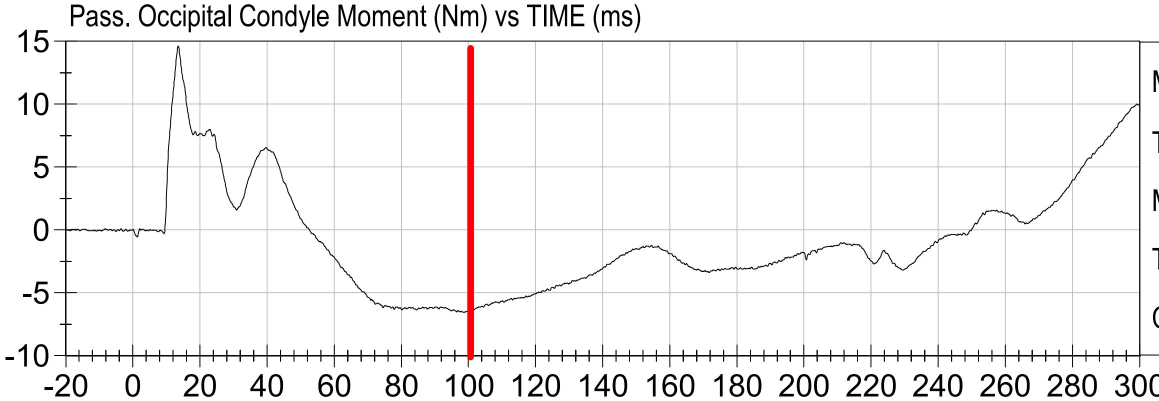
Max: 19.7 Nm
Tmax: 13.4 ms
Min: -5.8 Nm
Tmin: 98.4 ms
CFC 600

6YR OLD PASSENGER NECK MZ (Nm) vs TIME (ms)



Max: 2.2 Nm
Tmax: 53.0 ms
Min: -0.8 Nm
Tmin: 100.0 ms
CFC 600

Pass. Occipital Condyle Moment (Nm) vs TIME (ms)



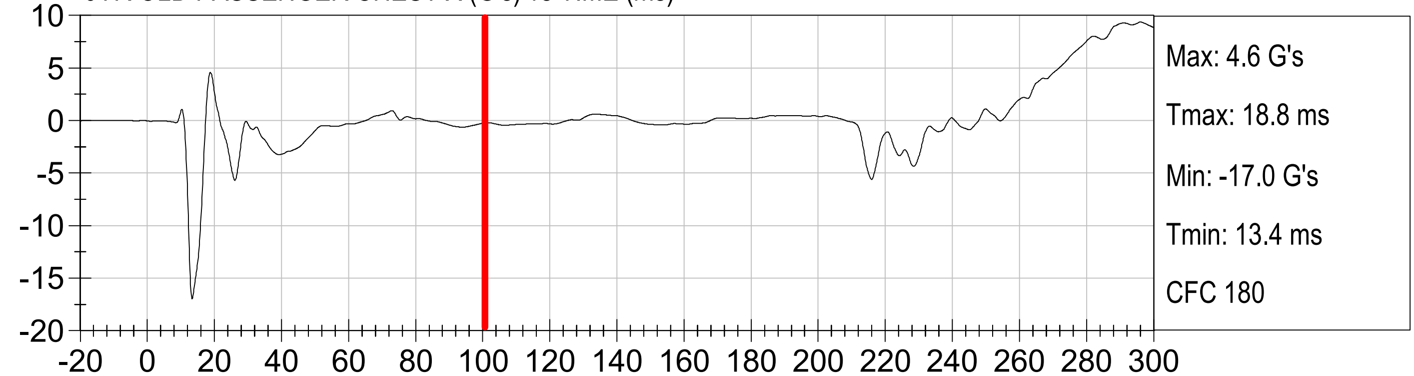
Max: 14.6 Nm
Tmax: 13.5 ms
Min: -6.5 Nm
Tmin: 98.6 ms
CFC 600

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

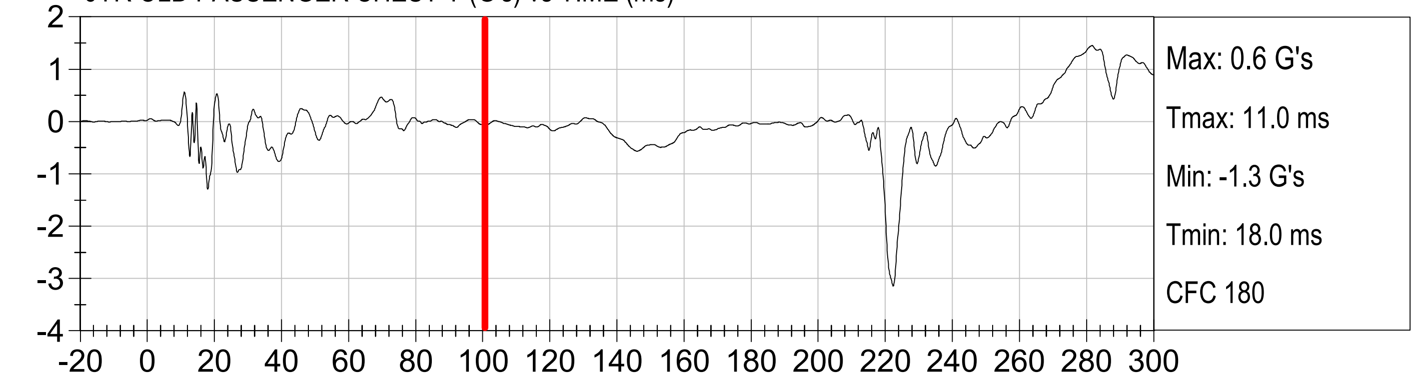
Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

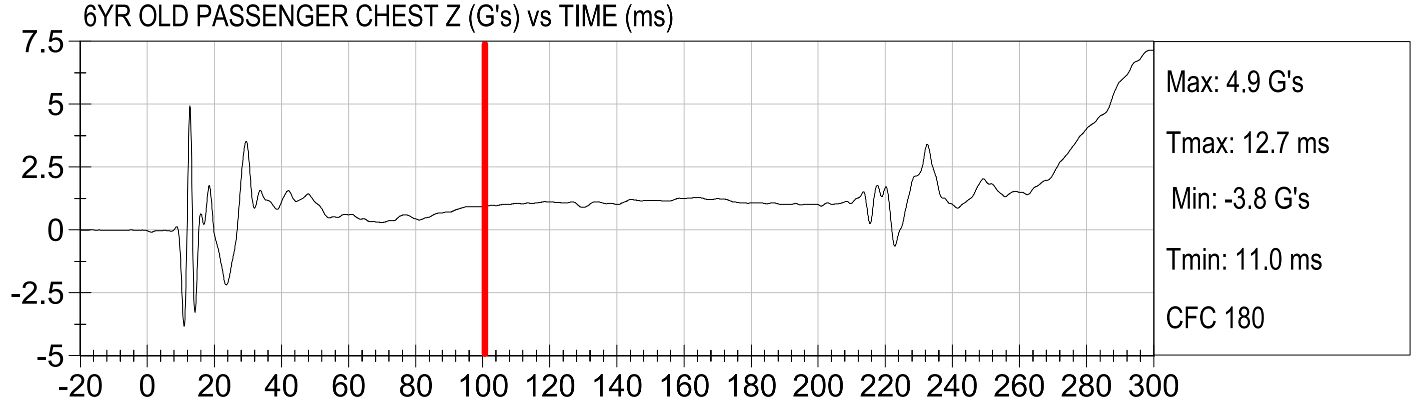
6YR OLD PASSENGER CHEST X (G's) vs TIME (ms)



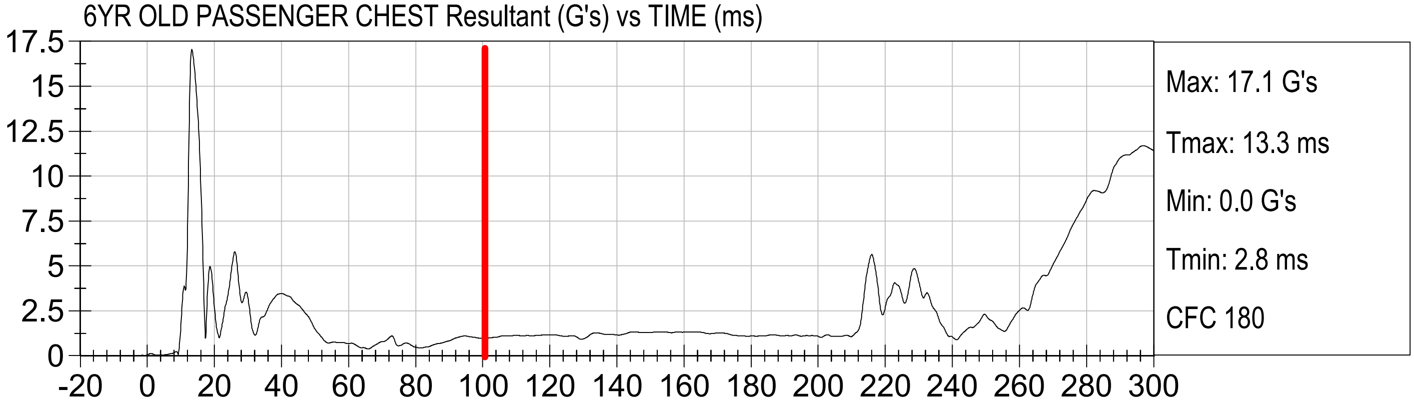
6YR OLD PASSENGER CHEST Y (G's) vs TIME (ms)



6YR OLD PASSENGER CHEST Z (G's) vs TIME (ms)



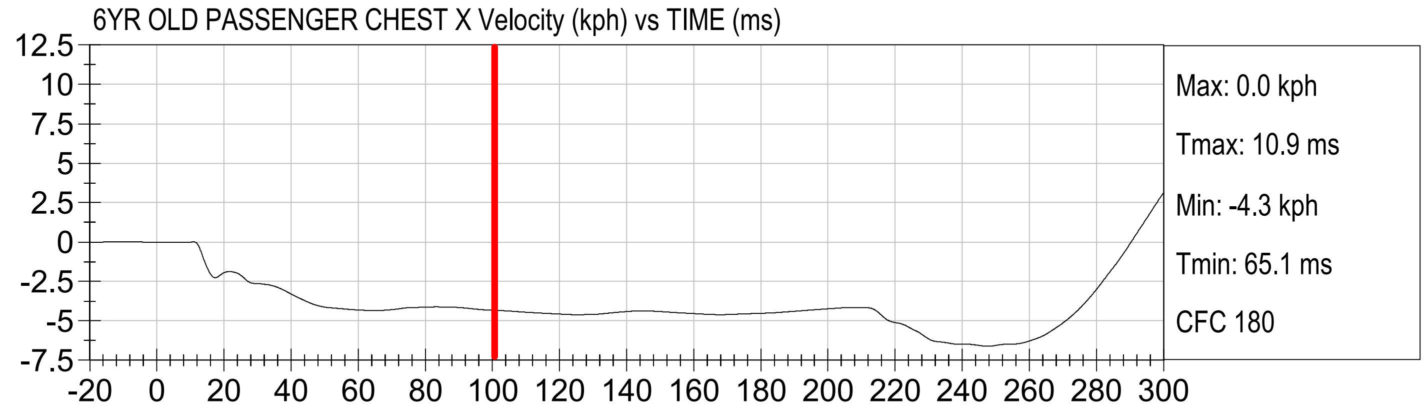
6YR OLD PASSENGER CHEST Resultant (G's) vs TIME (ms)

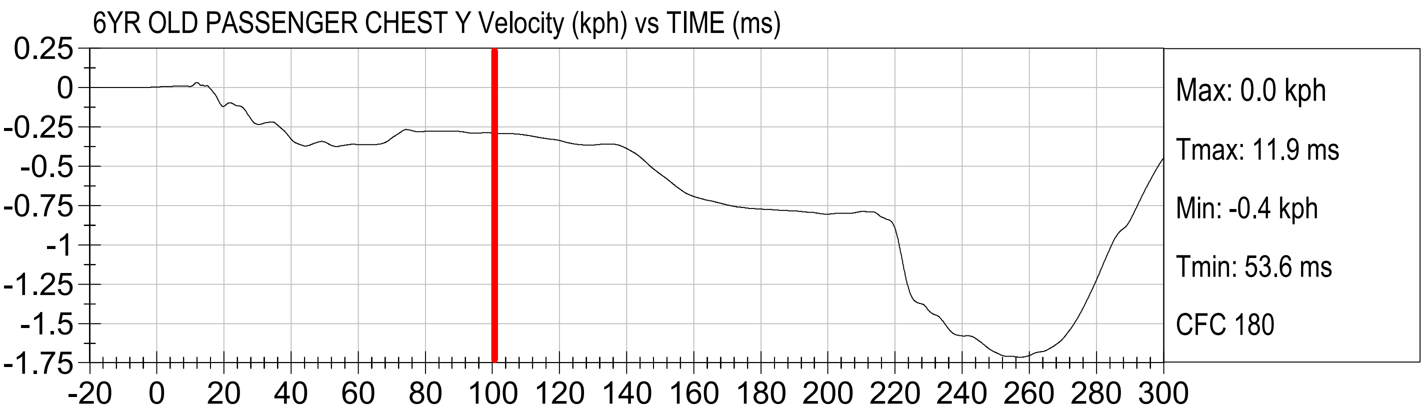


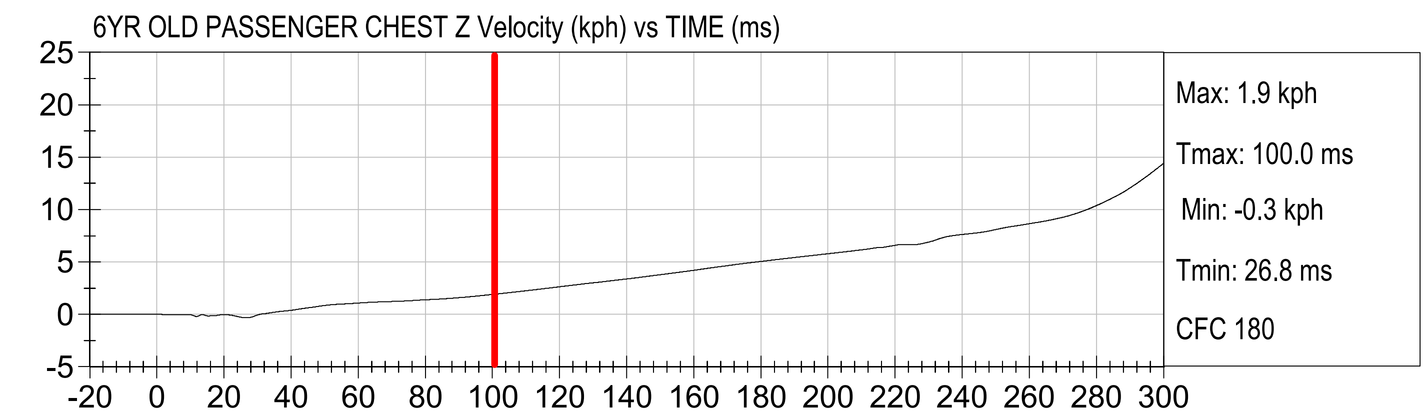
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

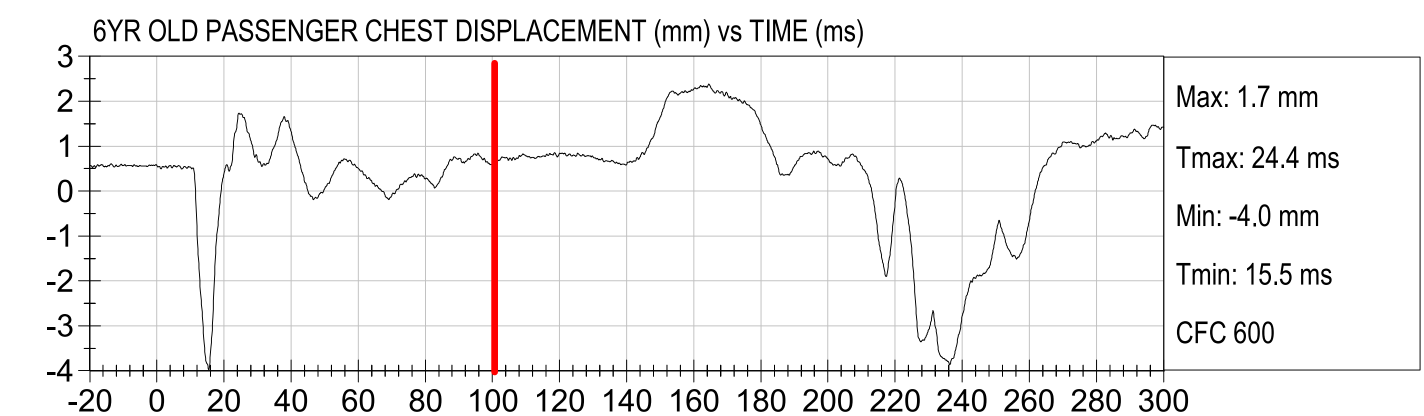
Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms









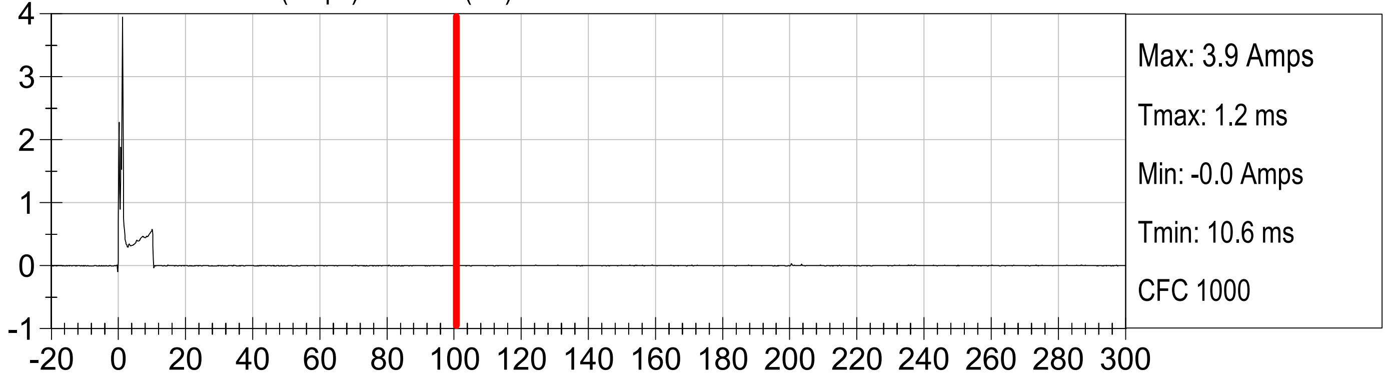
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P1)

Test Date: 03/29/06
Speed: 0.0 mph (0.0 km/h)

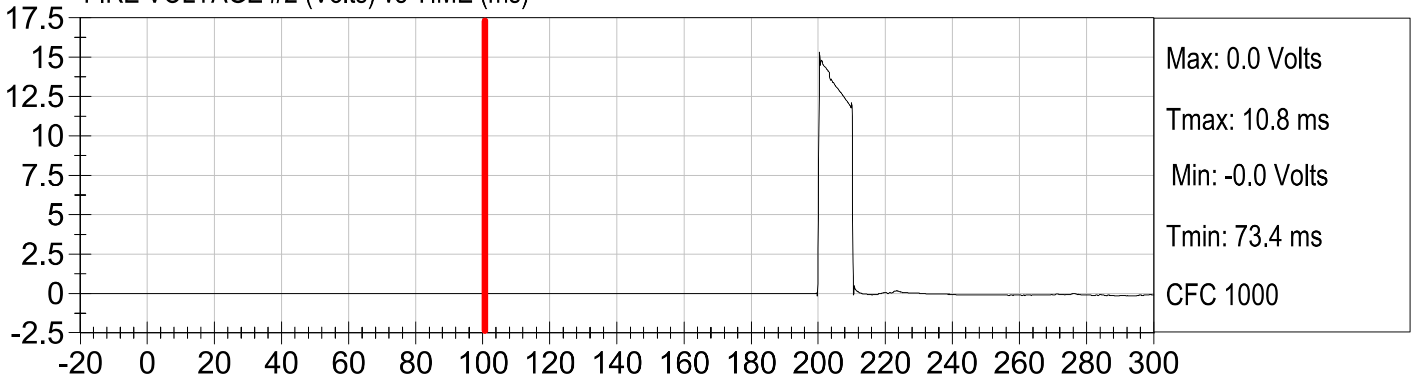
Injury Values Calculated between 0ms and 100ms

FIRE VOLTAGE #1 (Volts) vs TIME (ms)

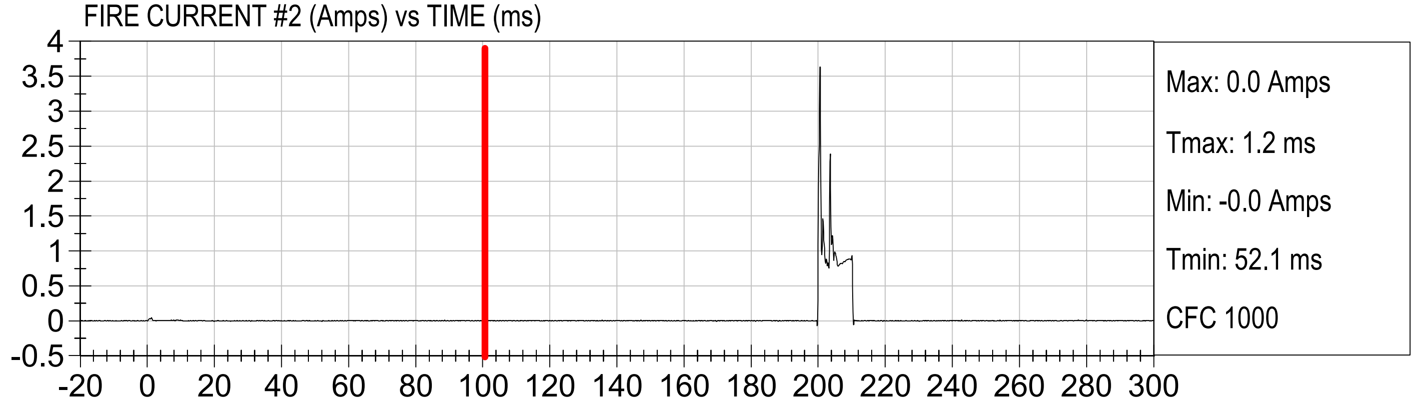
FIRE CURRENT #1 (Amps) vs TIME (ms)



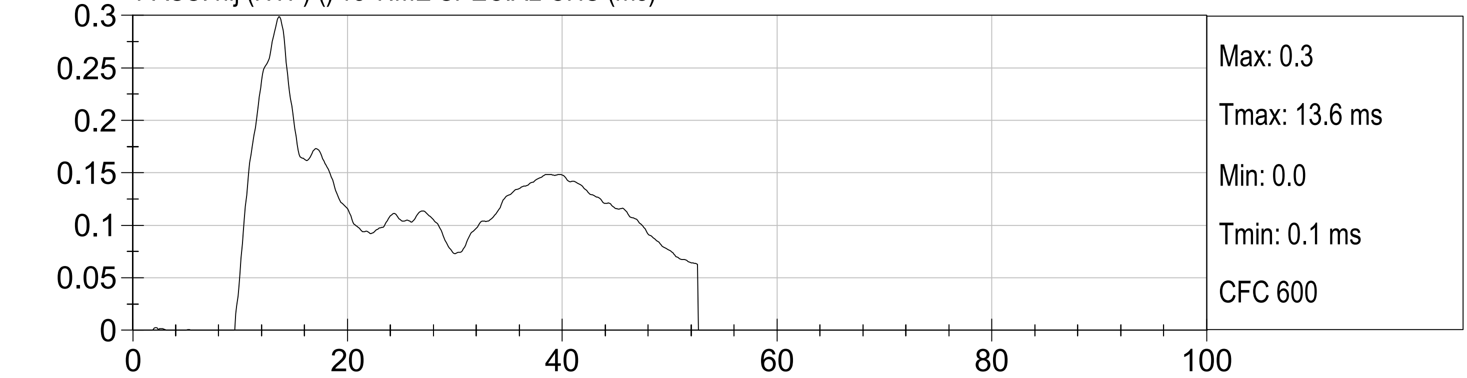
FIRE VOLTAGE #2 (Volts) vs TIME (ms)



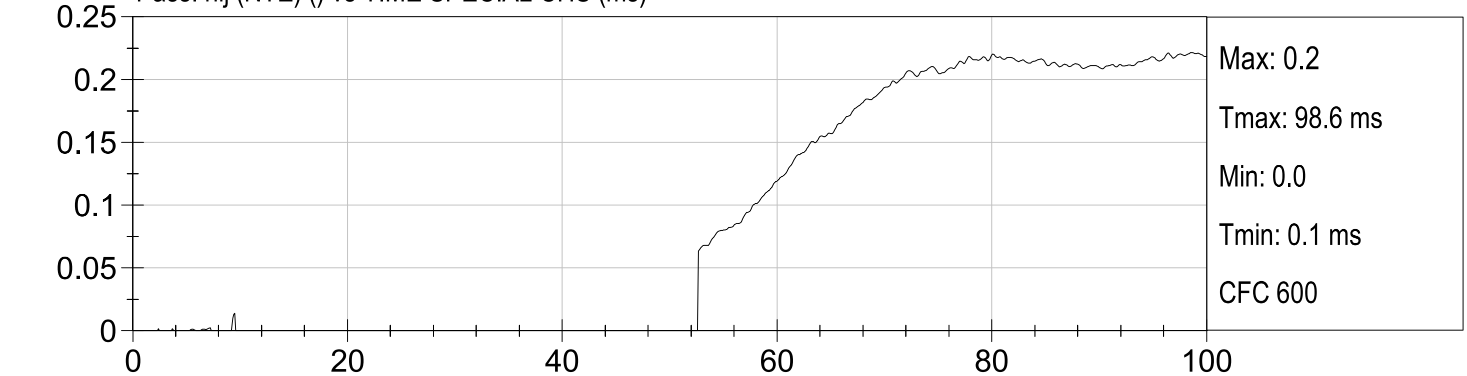
FIRE CURRENT #2 (Amps) vs TIME (ms)



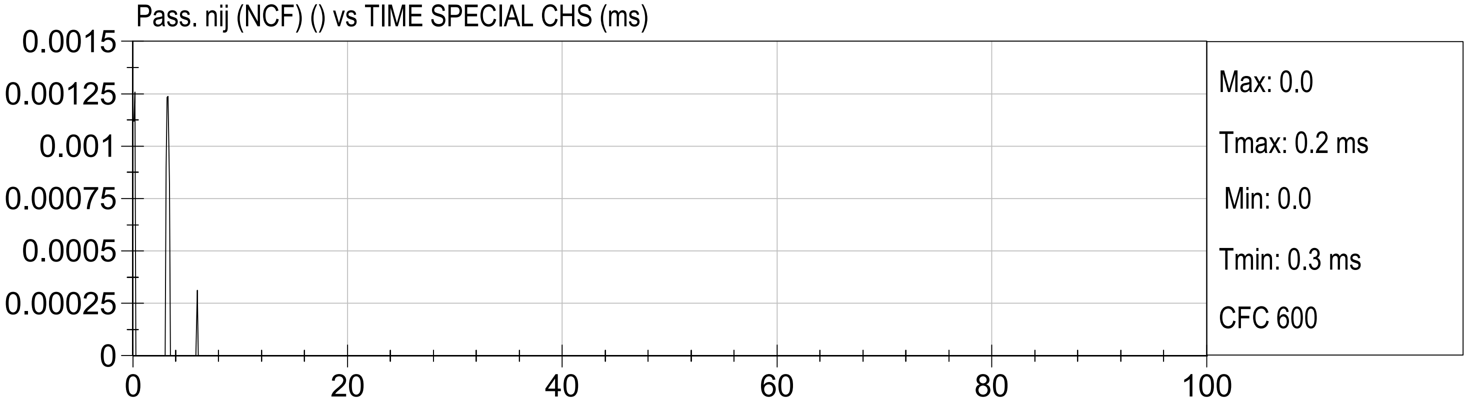
PASS. nij (NTF) () vs TIME SPECIAL CHS (ms)



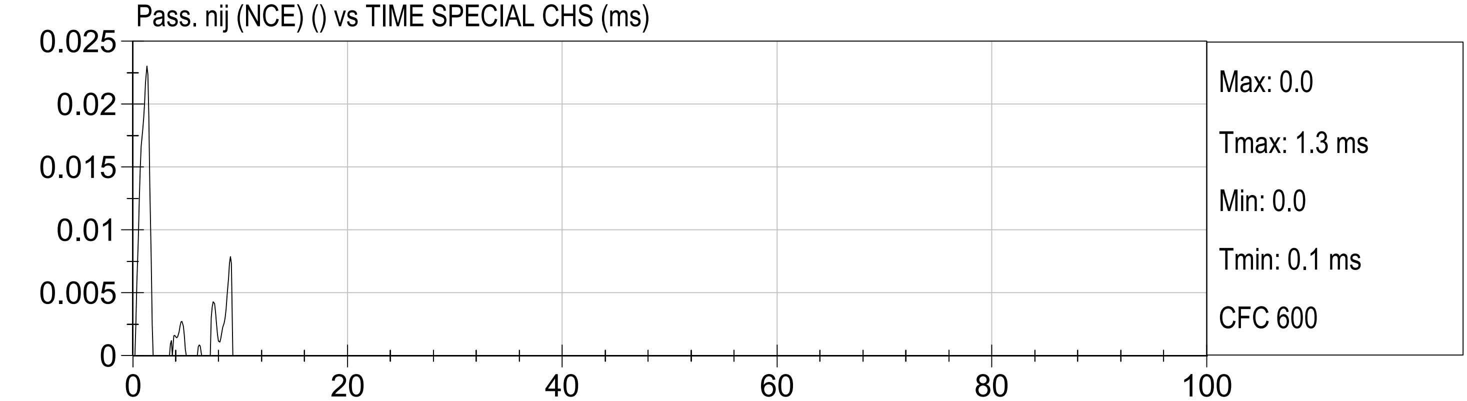
Pass. nij (NTE) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCF) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCE) () vs TIME SPECIAL CHS (ms)

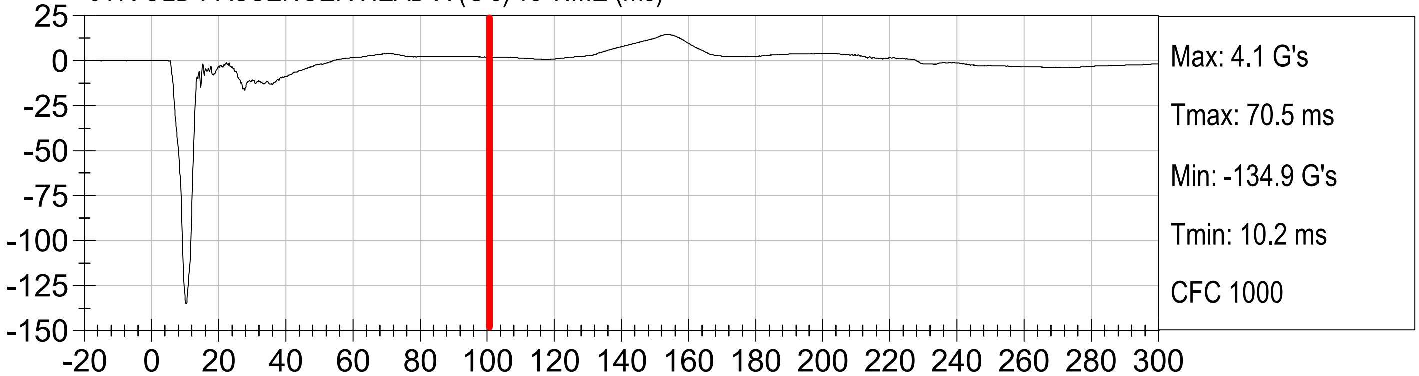


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

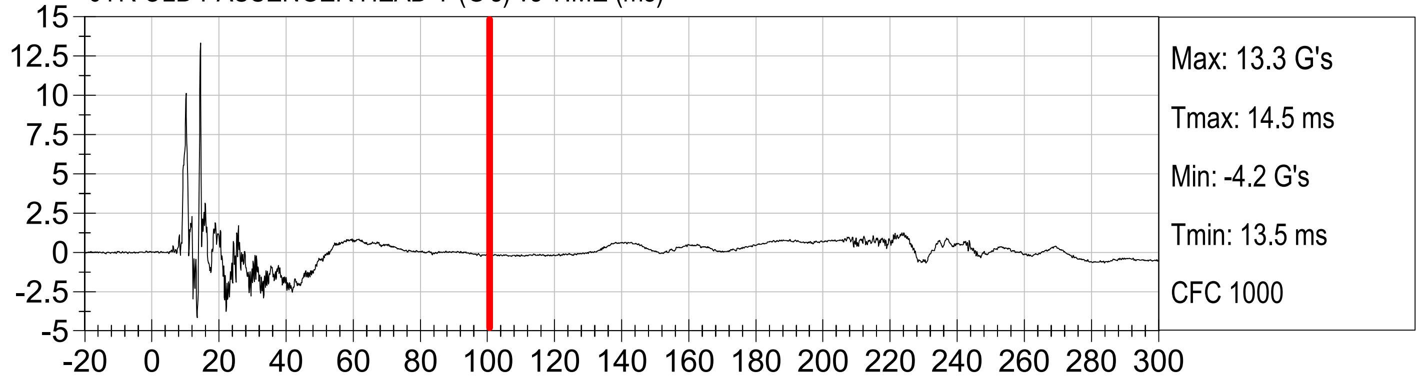
Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

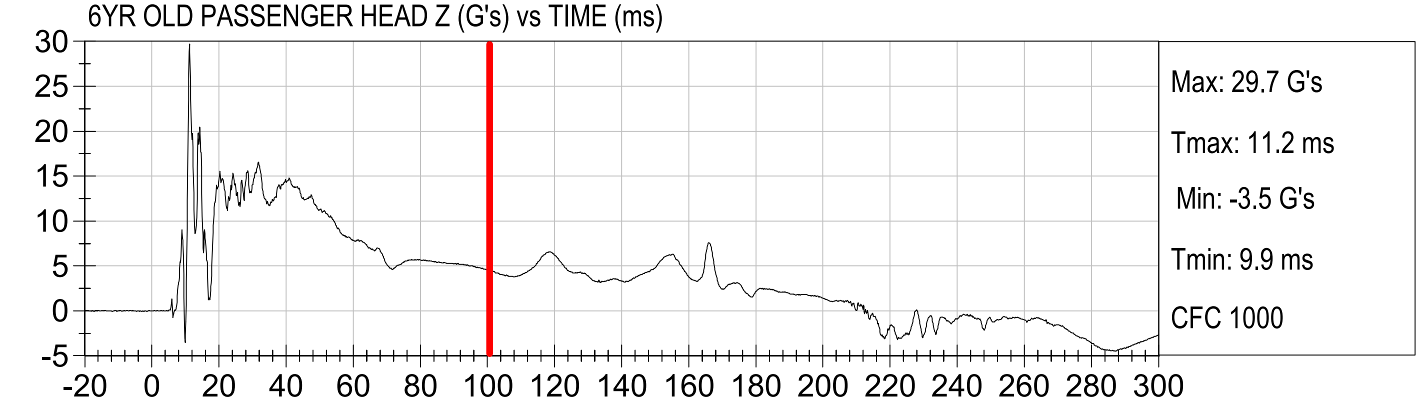
6YR OLD PASSENGER HEAD X (G's) vs TIME (ms)



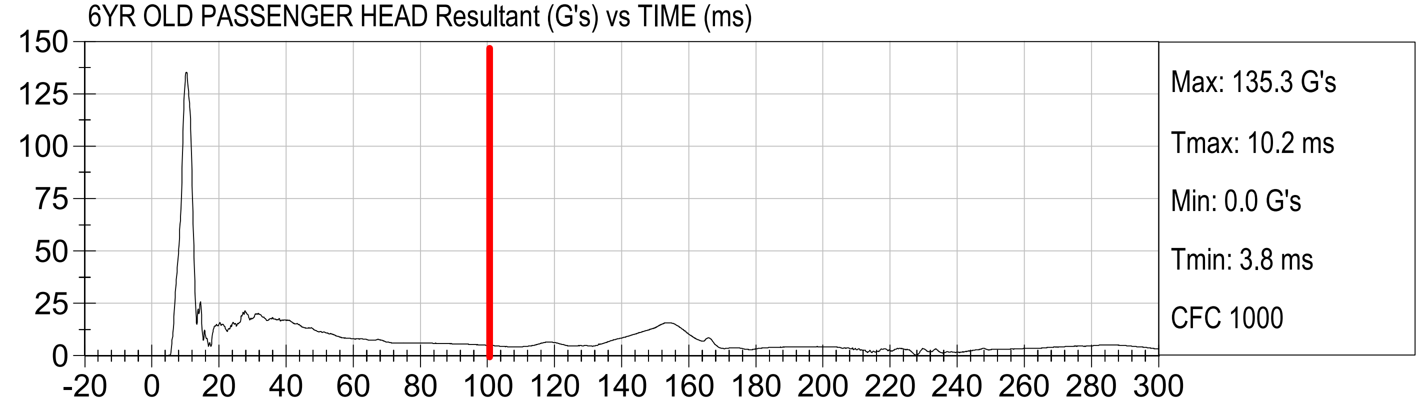
6YR OLD PASSENGER HEAD Y (G's) vs TIME (ms)



6YR OLD PASSENGER HEAD Z (G's) vs TIME (ms)



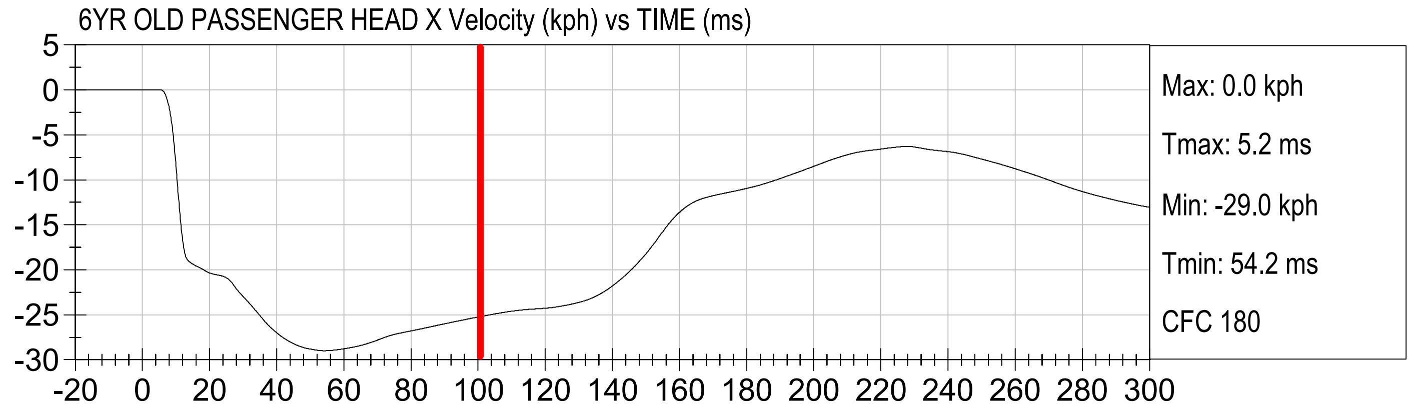
6YR OLD PASSENGER HEAD Resultant (G's) vs TIME (ms)

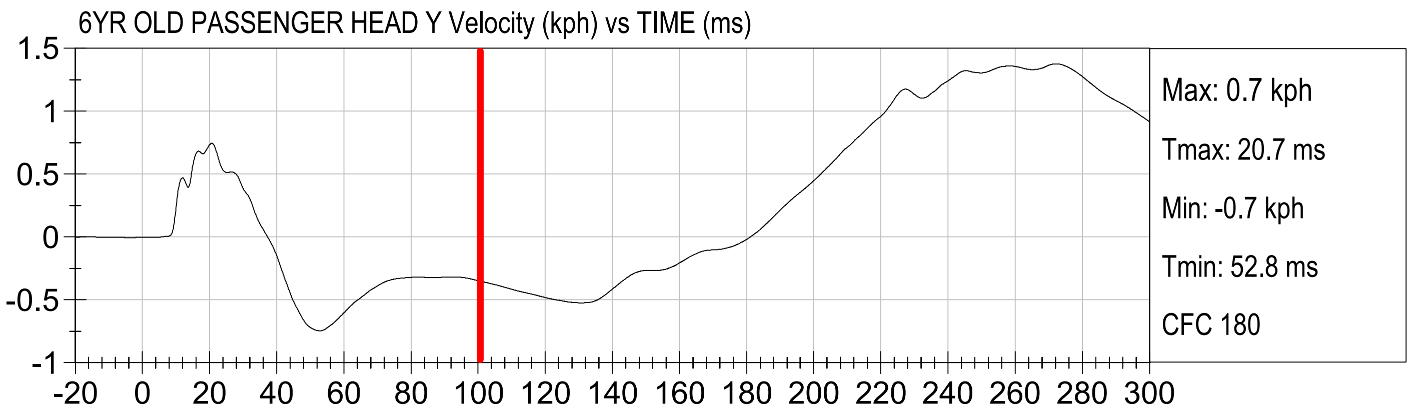


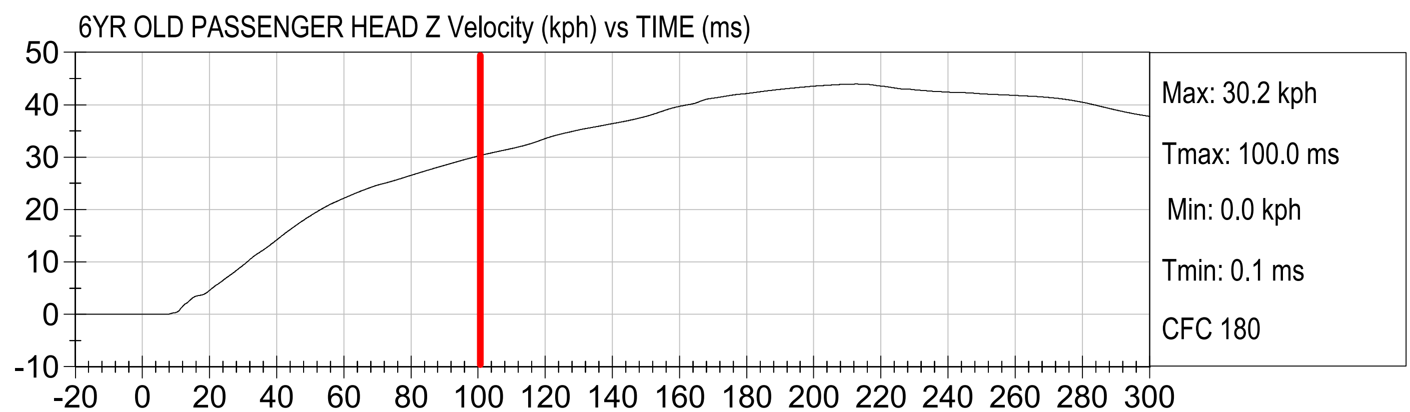
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms





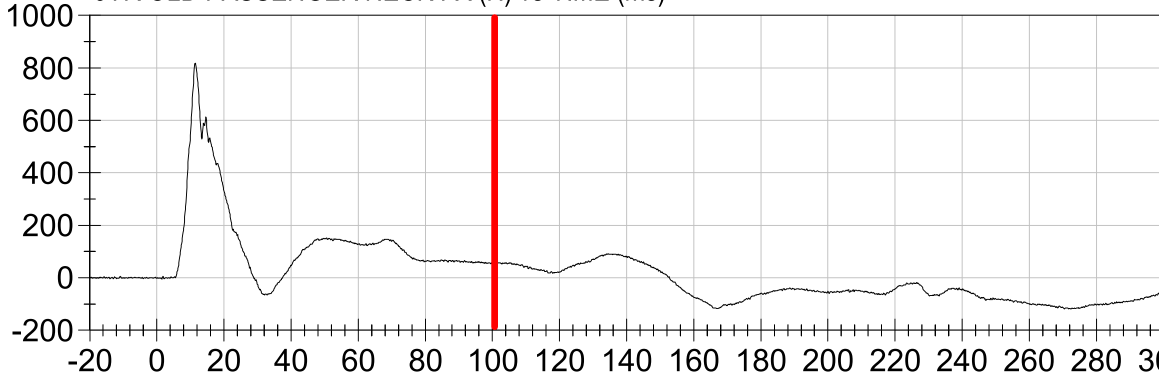


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

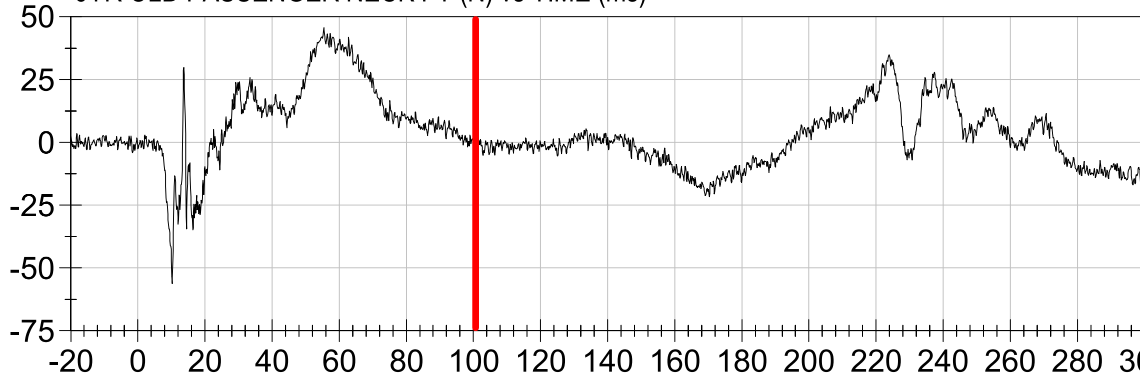
Injury Values Calculated between 0ms and 100ms

6YR OLD PASSENGER NECK FX (N) vs TIME (ms)



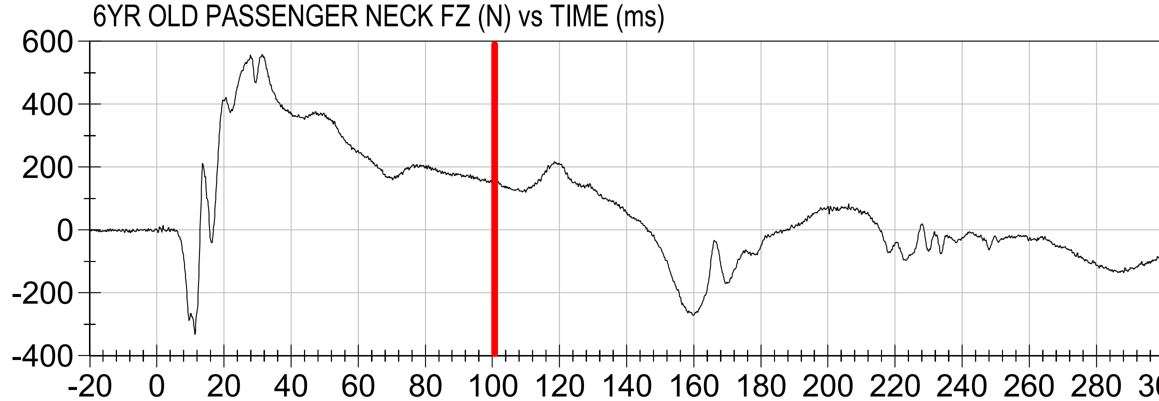
Max: 817.8 N
Tmax: 11.5 ms
Min: -65.6 N
Tmin: 32.9 ms
CFC 1000

6YR OLD PASSENGER NECK FY (N) vs TIME (ms)



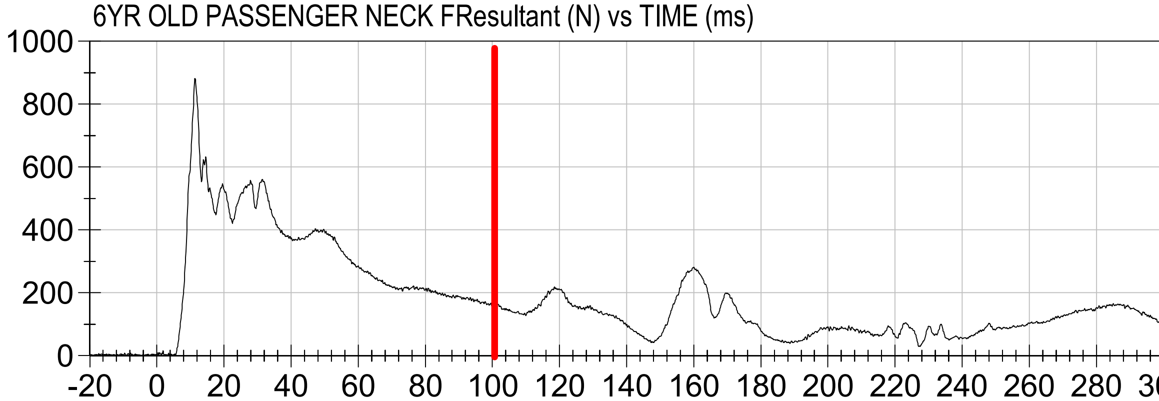
Max: 45.7 N
Tmax: 55.4 ms
Min: -56.2 N
Tmin: 10.2 ms
CFC 1000

6YR OLD PASSENGER NECK FZ (N) vs TIME (ms)



Max: 558.3 N
Tmax: 31.4 ms
Min: -332.2 N
Tmin: 11.4 ms
CFC 1000

6YR OLD PASSENGER NECK FResultant (N) vs TIME (ms)



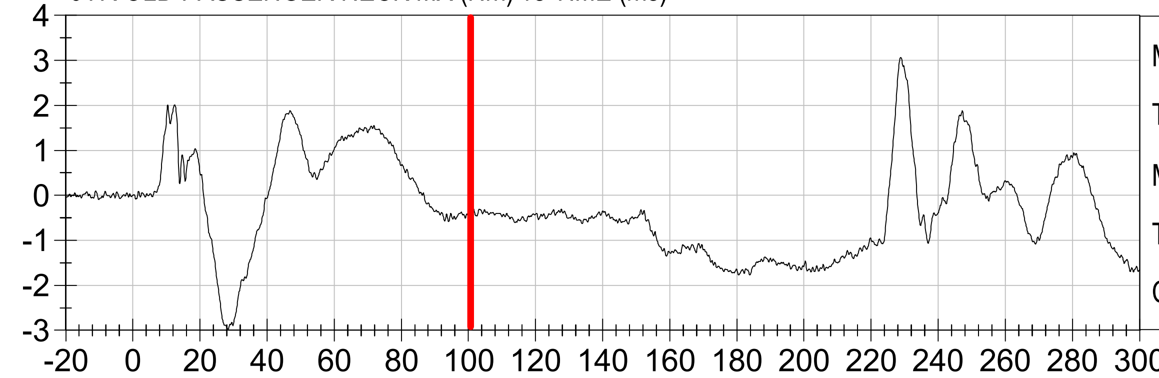
Max: 882.0 N
Tmax: 11.4 ms
Min: 1.2 N
Tmin: 3.2 ms
CFC 1000

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

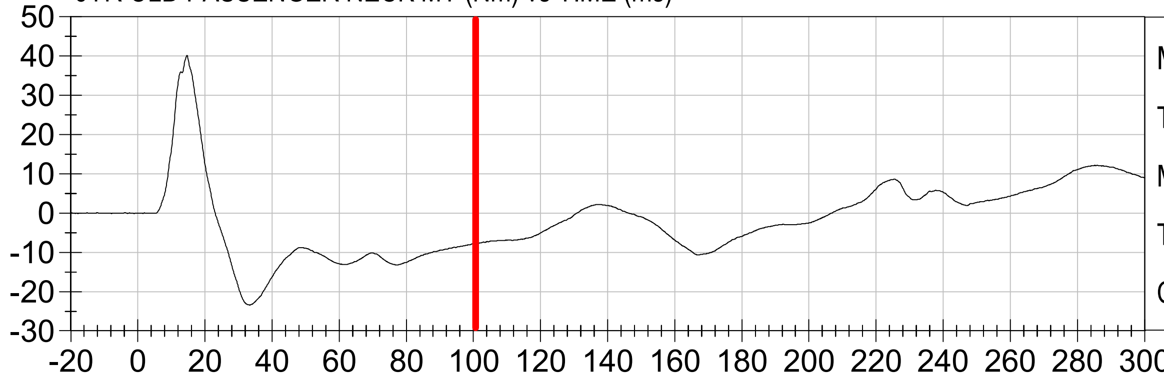
Injury Values Calculated between 0ms and 100ms

6YR OLD PASSENGER NECK MX (Nm) vs TIME (ms)



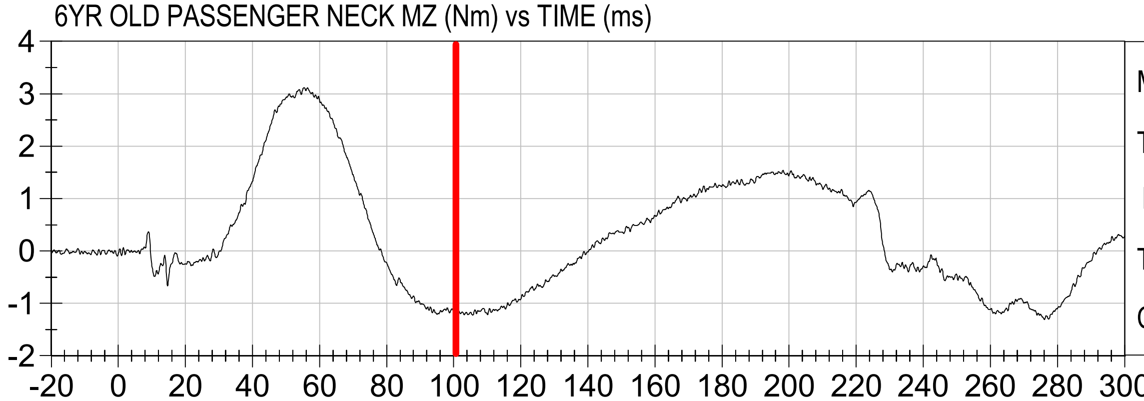
Max: 2.0 Nm
Tmax: 10.4 ms
Min: -3.0 Nm
Tmin: 28.4 ms
CFC 600

6YR OLD PASSENGER NECK MY (Nm) vs TIME (ms)



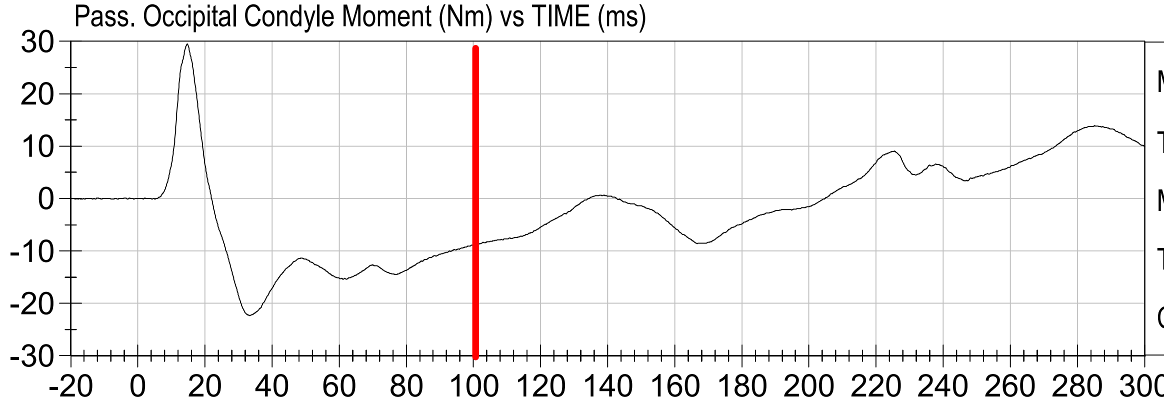
Max: 40.2 Nm
Tmax: 14.7 ms
Min: -23.4 Nm
Tmin: 33.3 ms
CFC 600

6YR OLD PASSENGER NECK MZ (Nm) vs TIME (ms)



Max: 3.1 Nm
Tmax: 55.4 ms
Min: -1.2 Nm
Tmin: 95.0 ms
CFC 600

Pass. Occipital Condyle Moment (Nm) vs TIME (ms)



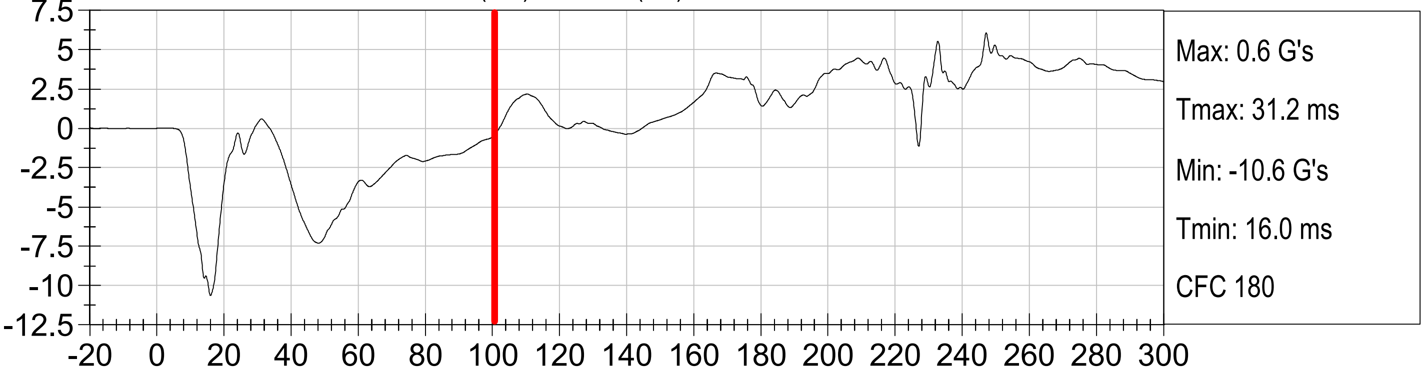
Max: 29.5 Nm
Tmax: 14.8 ms
Min: -22.3 Nm
Tmin: 33.4 ms
CFC 600

LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

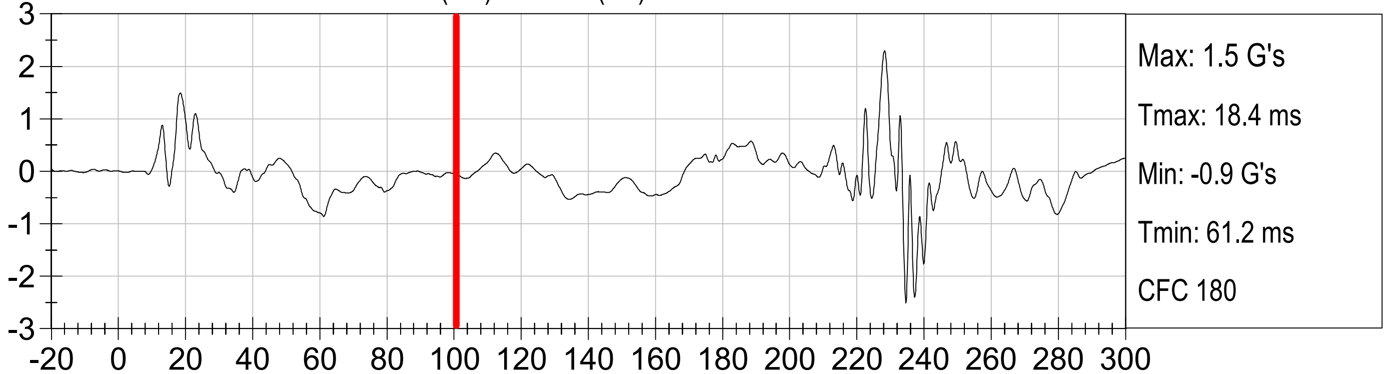
Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

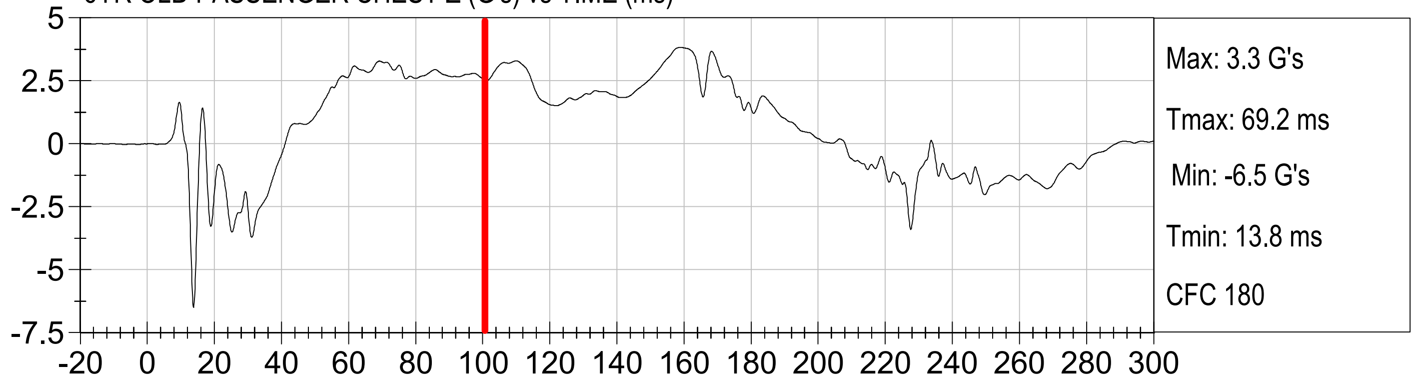
6YR OLD PASSENGER CHEST X (G's) vs TIME (ms)



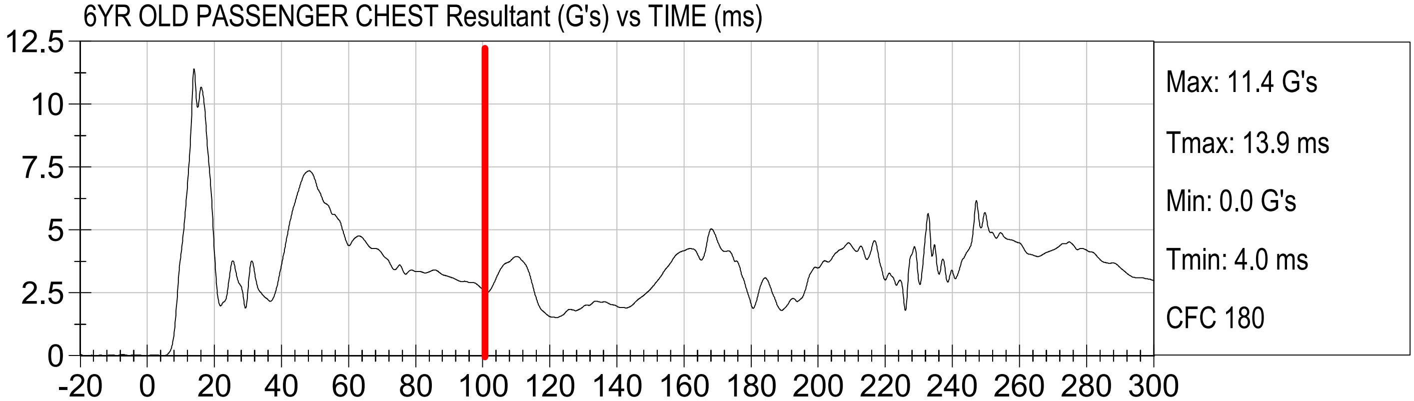
6YR OLD PASSENGER CHEST Y (G's) vs TIME (ms)



6YR OLD PASSENGER CHEST Z (G's) vs TIME (ms)



6YR OLD PASSENGER CHEST Resultant (G's) vs TIME (ms)

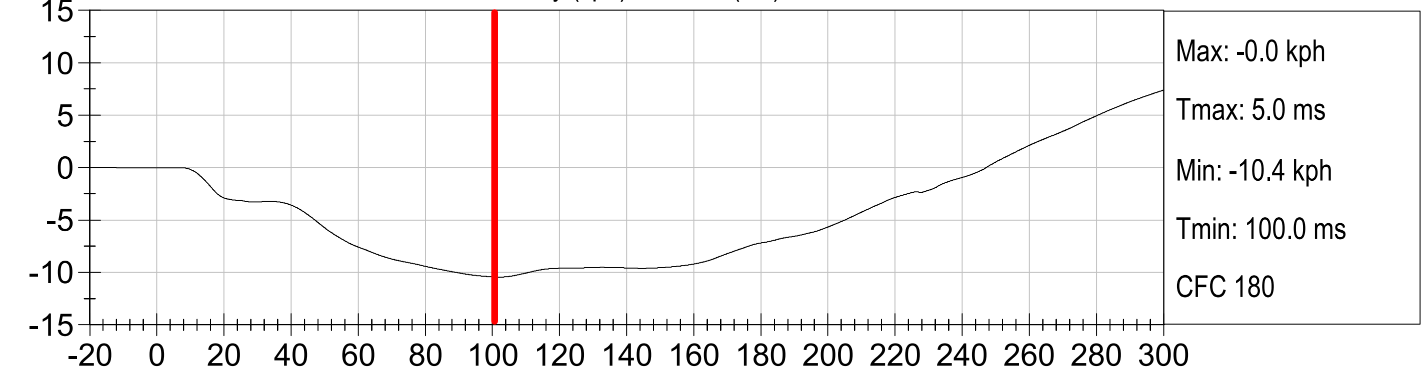


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

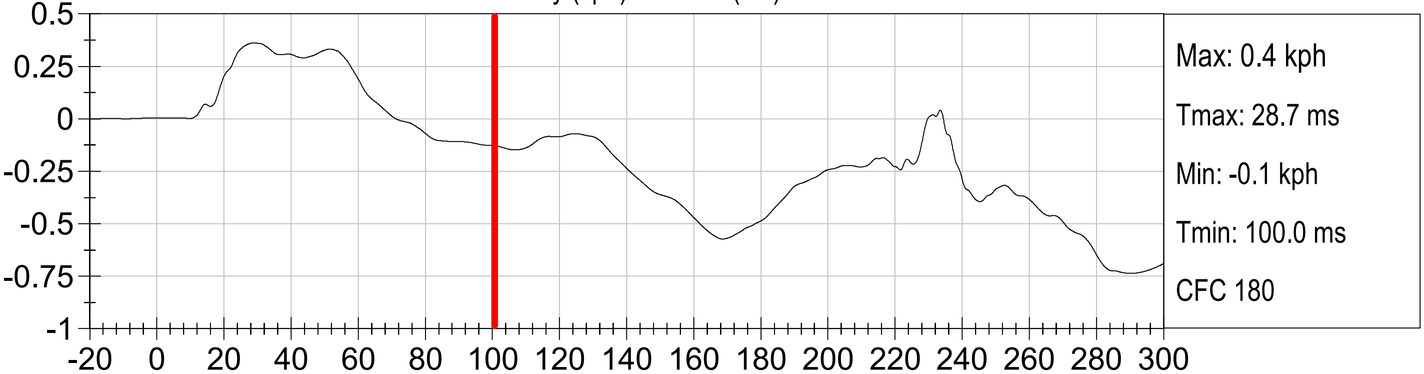
Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 100ms

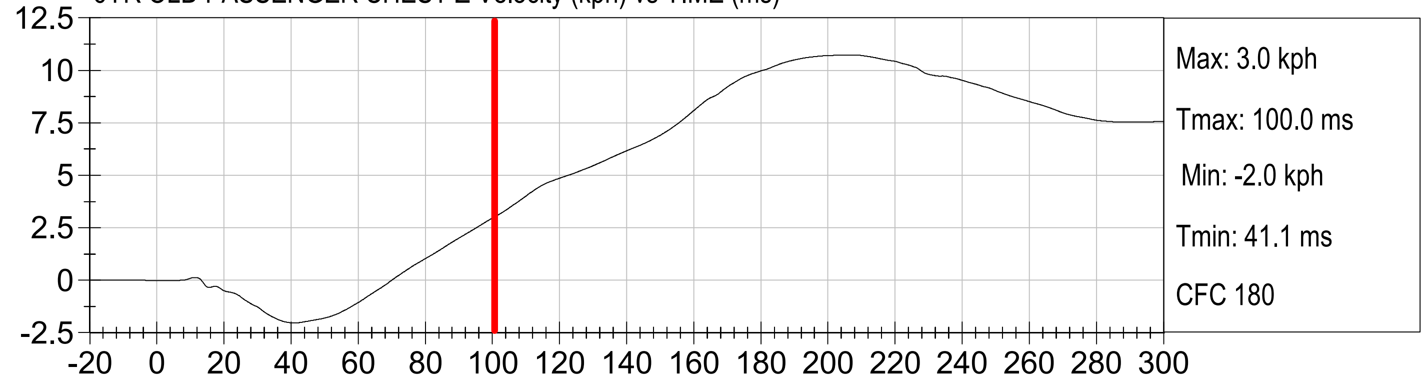
6YR OLD PASSENGER CHEST X Velocity (kph) vs TIME (ms)



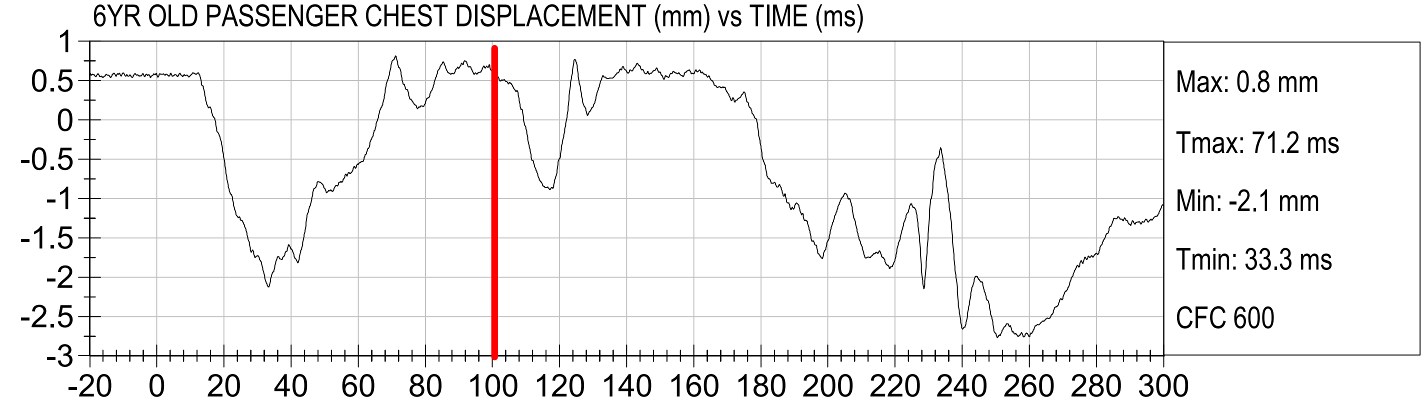
6YR OLD PASSENGER CHEST Y Velocity (kph) vs TIME (ms)



6YR OLD PASSENGER CHEST Z Velocity (kph) vs TIME (ms)



6YR OLD PASSENGER CHEST DISPLACEMENT (mm) vs TIME (ms)

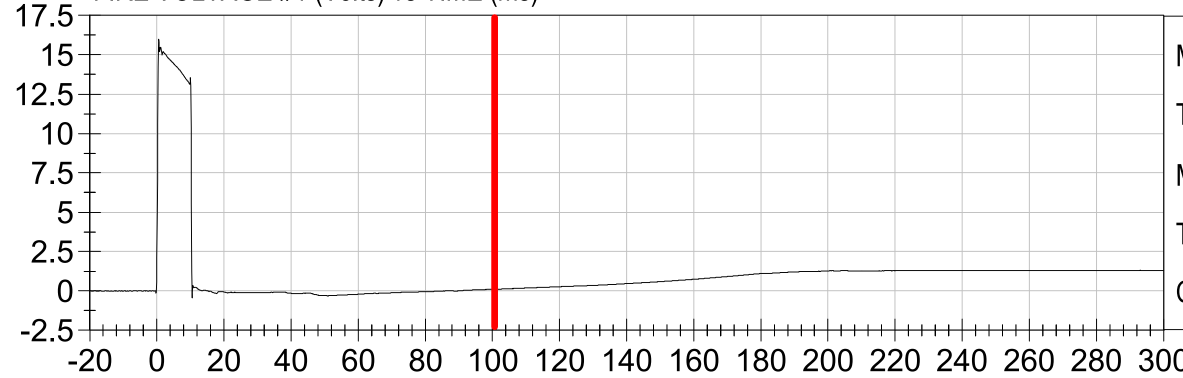


LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

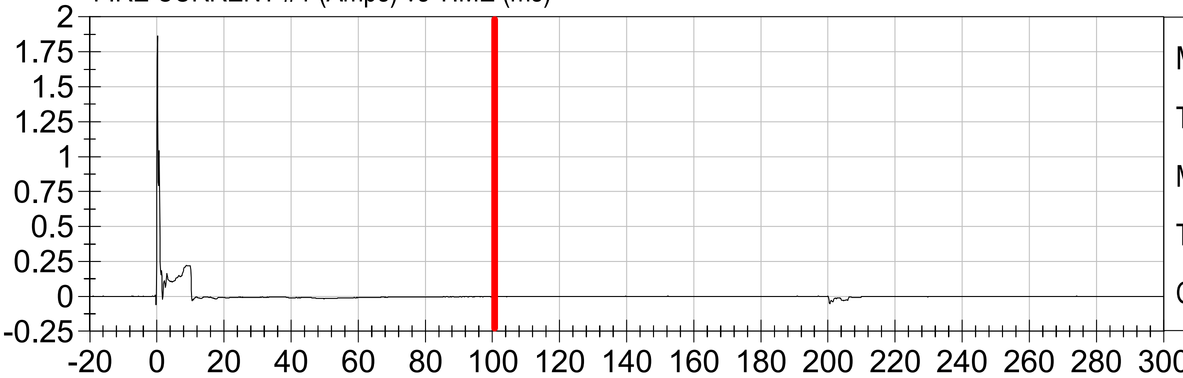
Injury Values Calculated between 0ms and 100ms

FIRE VOLTAGE #1 (Volts) vs TIME (ms)



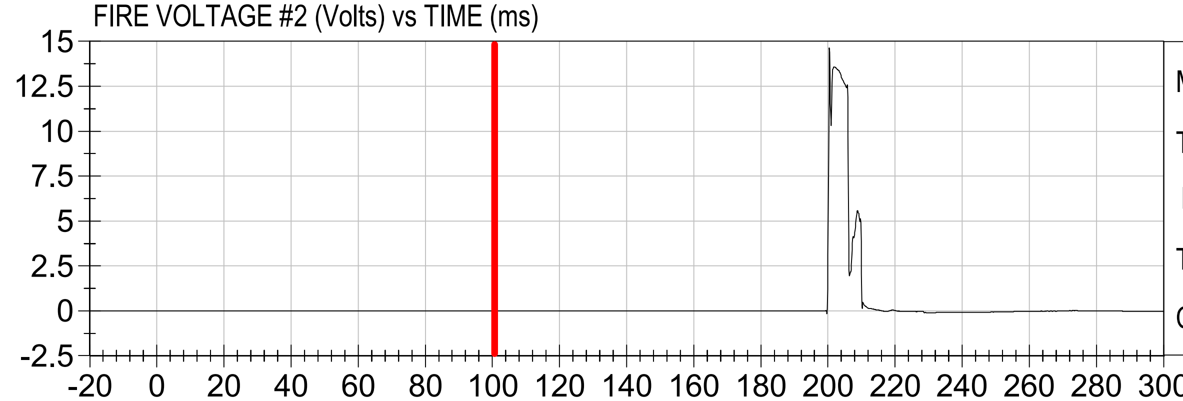
Max: 16.0 Volts
Tmax: 0.5 ms
Min: -0.4 Volts
Tmin: 10.5 ms
CFC 1000

FIRE CURRENT #1 (Amps) vs TIME (ms)



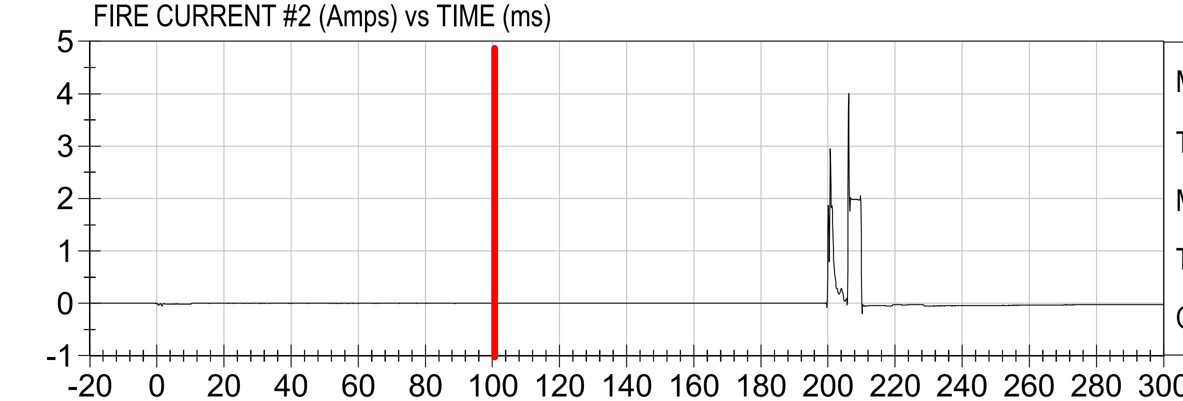
Max: 1.9 Amps
Tmax: 0.2 ms
Min: -0.0 Amps
Tmin: 10.5 ms
CFC 1000

FIRE VOLTAGE #2 (Volts) vs TIME (ms)



Max: 0.0 Volts
Tmax: 94.7 ms
Min: -0.0 Volts
Tmin: 37.1 ms
CFC 1000

FIRE CURRENT #2 (Amps) vs TIME (ms)

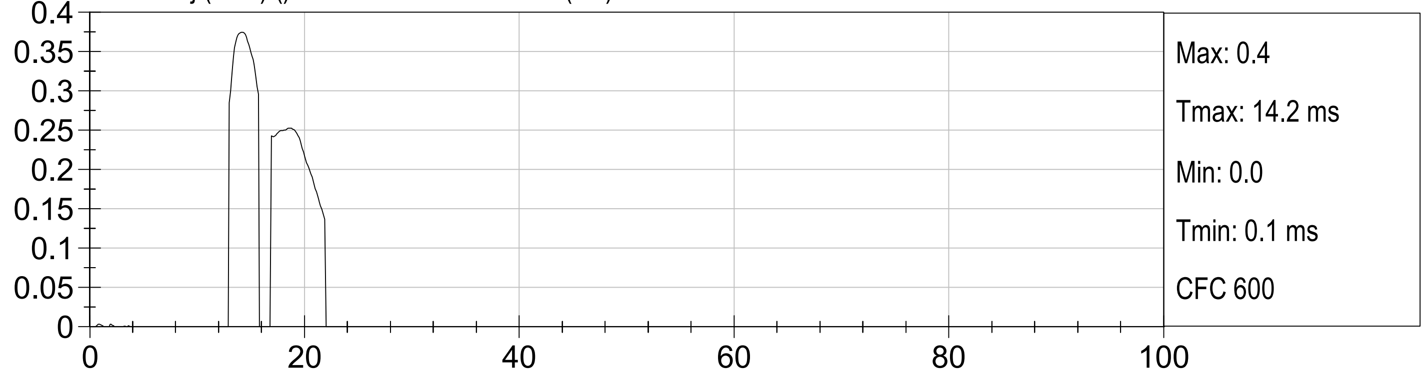


Max: 0.0 Amps
Tmax: 95.0 ms
Min: -0.1 Amps
Tmin: 1.6 ms
CFC 1000

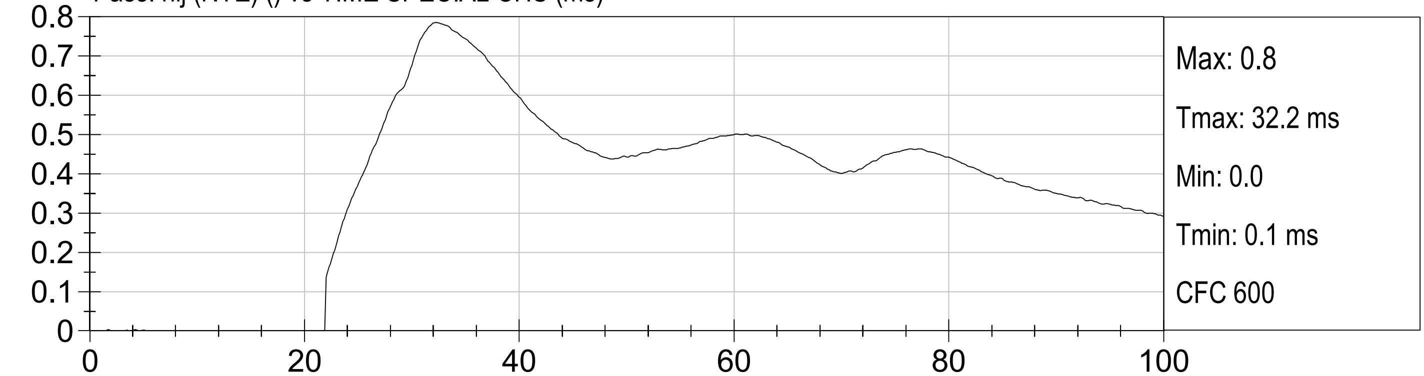
LOW RISK DEPLOYMENT
2006 Mercedes E350 (C60503) (6YO P2)

Test Date: 05/10/06
Speed: 0.0 mph (0.0 km/h)

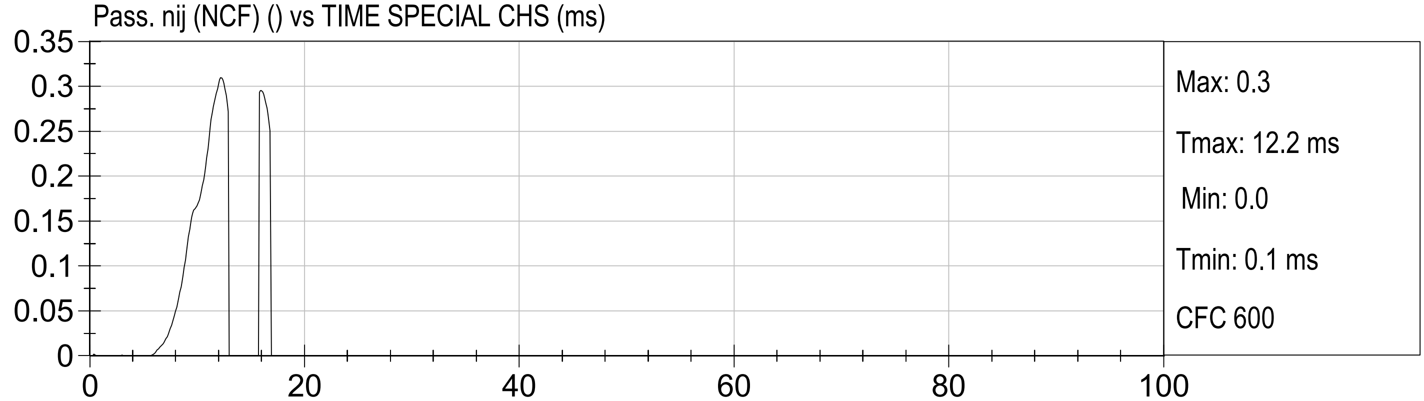
PASS. nij (NTF) () vs TIME SPECIAL CHS (ms)



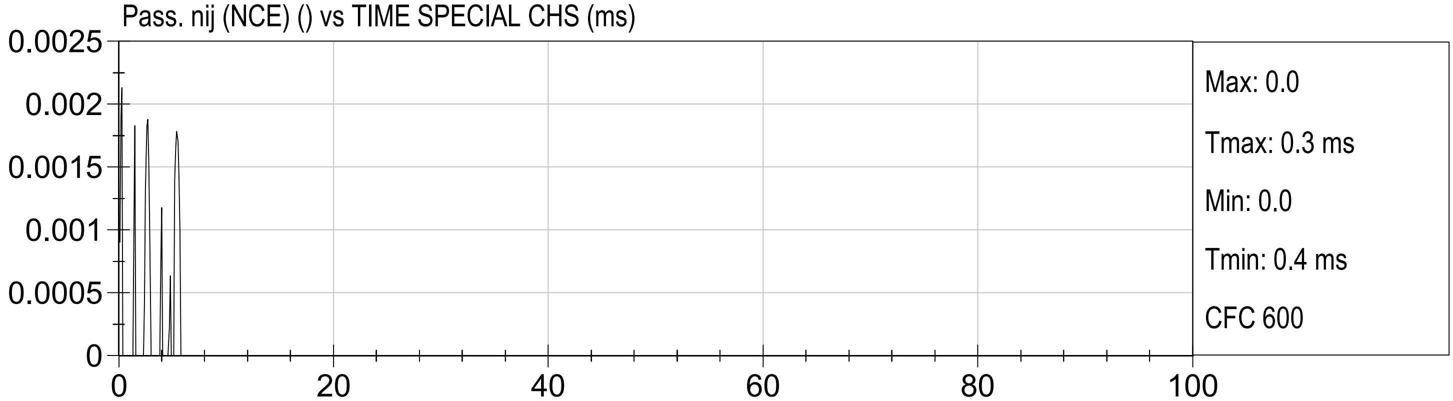
Pass. nij (NTE) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCF) () vs TIME SPECIAL CHS (ms)



Pass. nij (NCE) () vs TIME SPECIAL CHS (ms)



APPENDIX C

CRASH TEST PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Vehicle Certification Label

Tire Placard

Pre-Test Front View of Test Vehicle

Post-Test Front View of Test Vehicle

Pre-Test Left Side View of Test Vehicle

Post-Test Left Side View of Test Vehicle

Pre-Test Right Side View of Test Vehicle

Post-Test Right Side View of Test Vehicle

Pre-Test Right Front Three-Quarter View of Test Vehicle

Post-Test Right Front Three-Quarter View of Test Vehicle

Pre-Test Left Front Three-Quarter View of Test Vehicle

Post-Test Left Front Three-Quarter View of Test Vehicle

Pre-Test Right Rear Three-Quarter View of Test Vehicle

Post-Test Right Rear Three-Quarter View of Test Vehicle

Pre-Test Left Rear Three-Quarter View of Test Vehicle

Post-Test Left Rear Three-Quarter View of Test Vehicle

Pre-Test Rear View of Test Vehicle

Post-Test Rear View of Test Vehicle

Pre-Test Windshield View

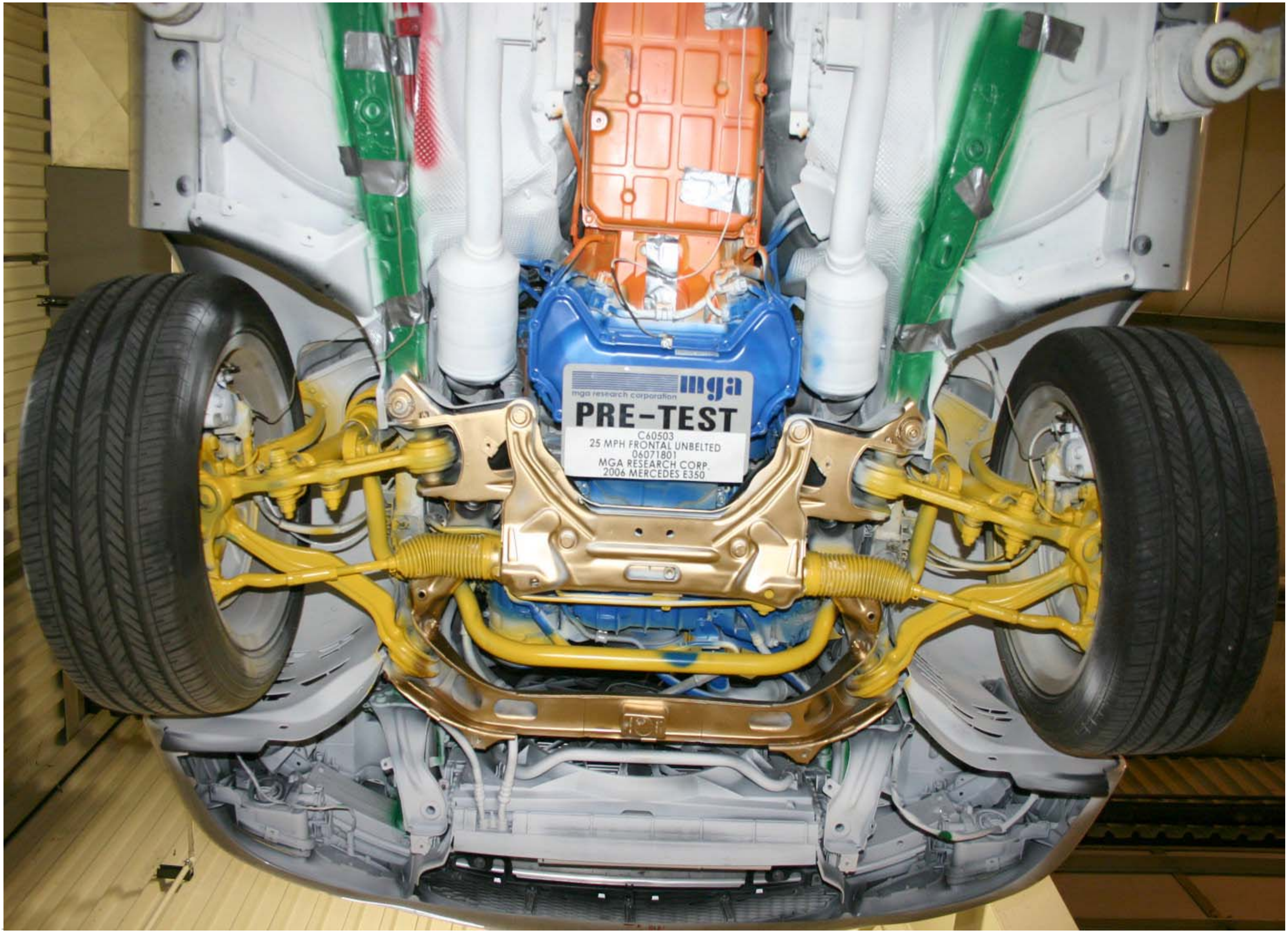
Post-Test Windshield View

Pre-Test Engine Compartment View

Post-Test Engine Compartment View

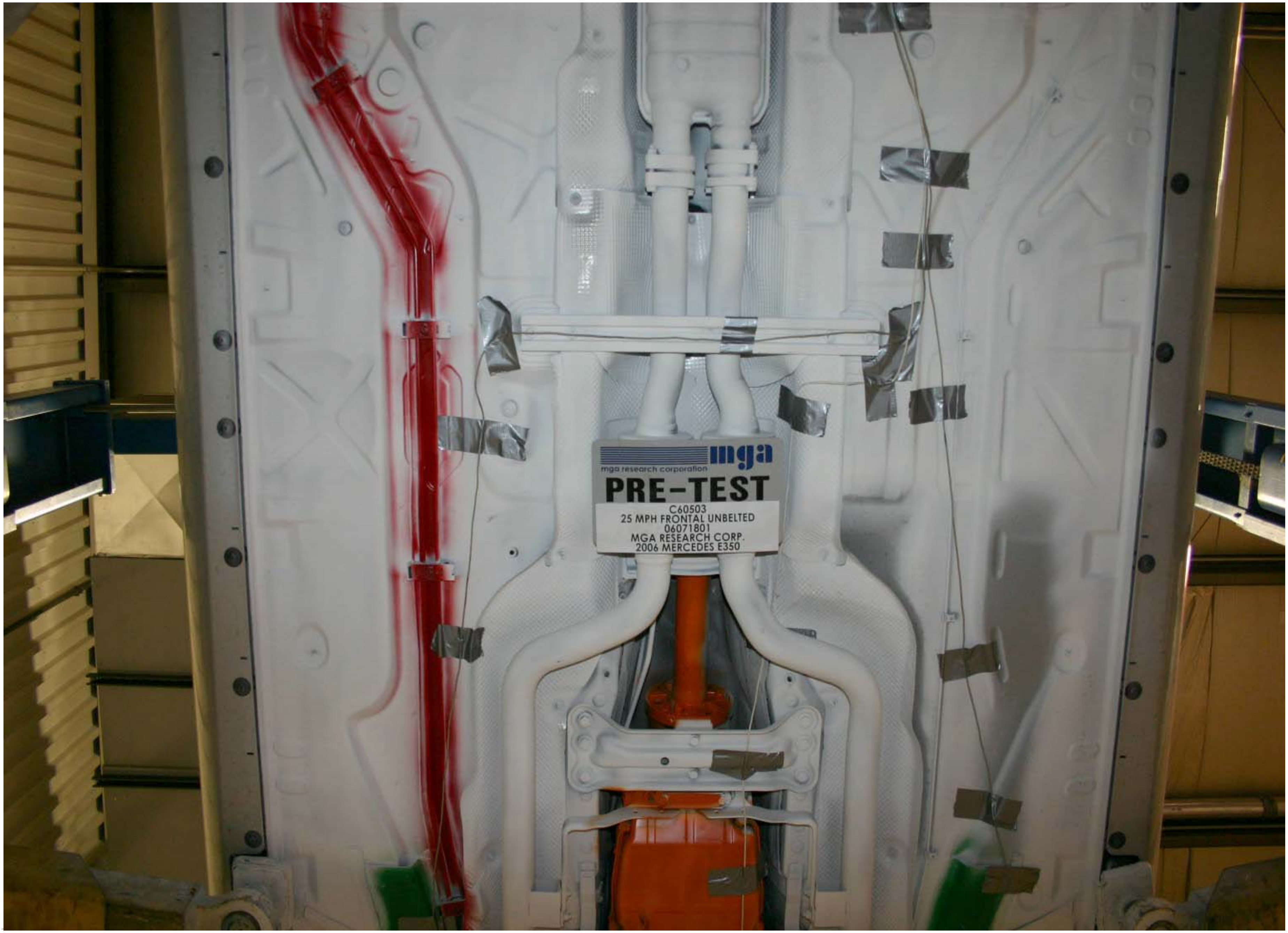
Pre-Test Fuel Filler Cap View

Post-Test Fuel Filler Cap View



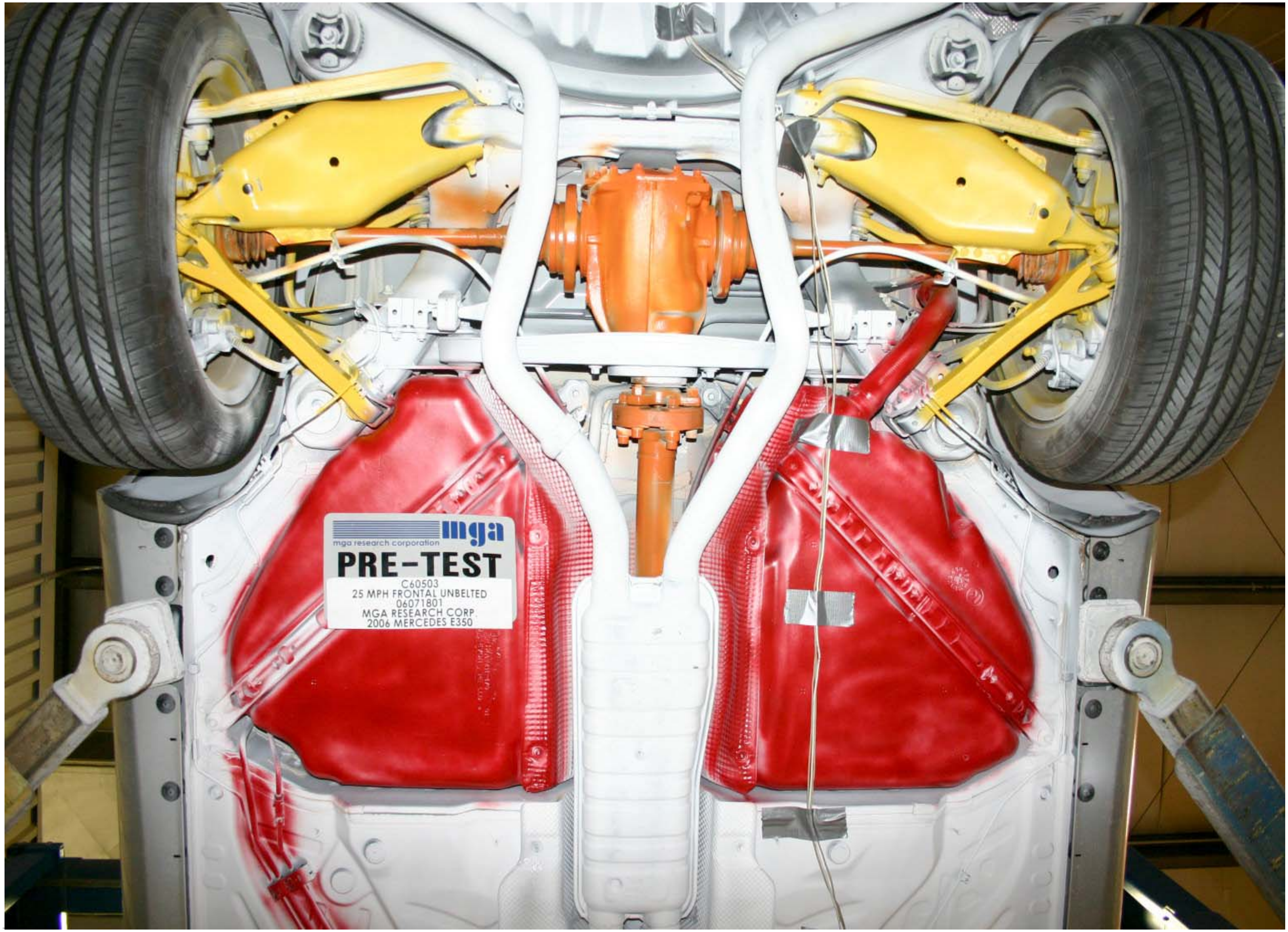
Pre-Test Front Underbody View

Post-Test Front Underbody View

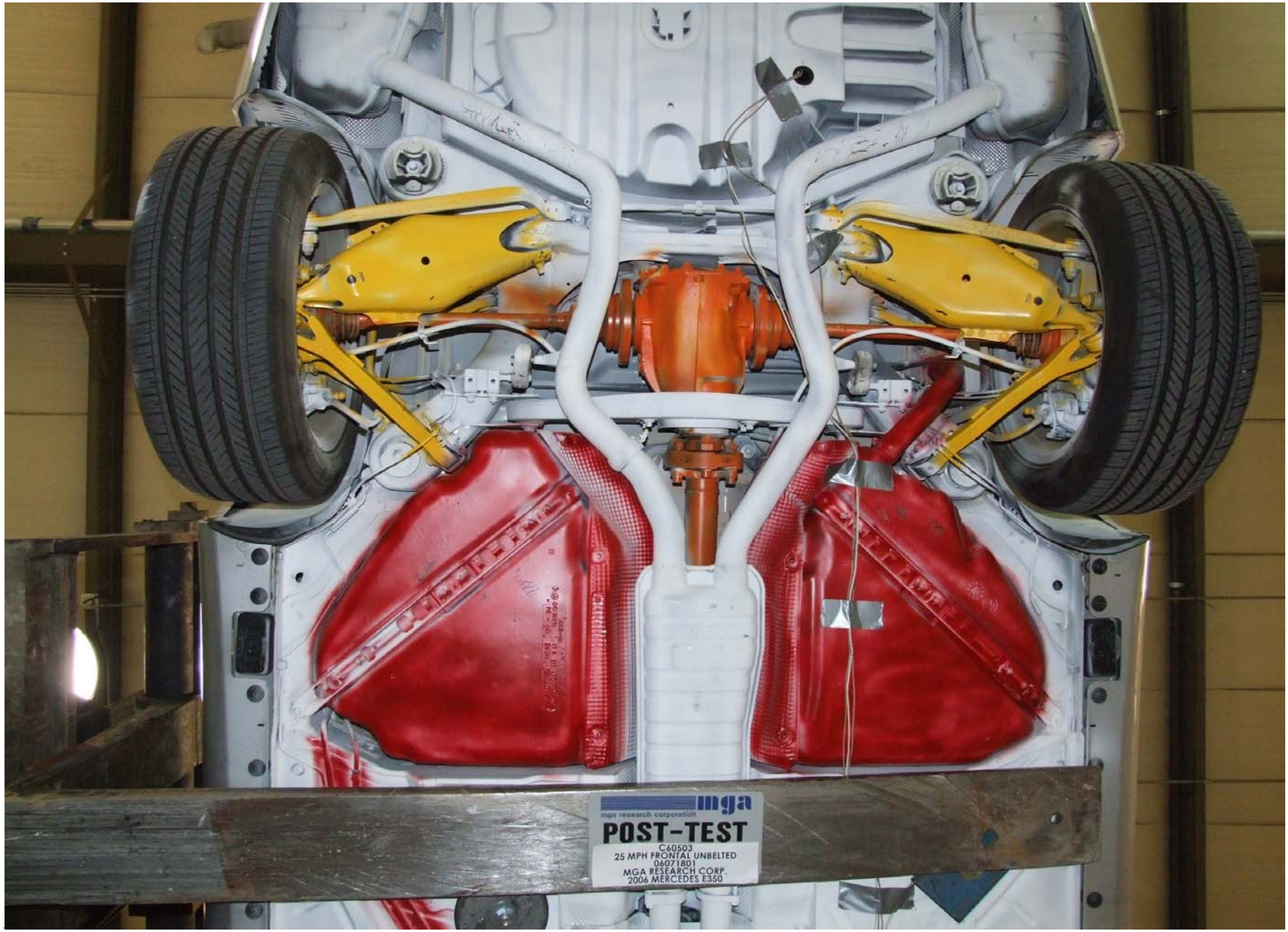


Pre-Test Mid Underbody View

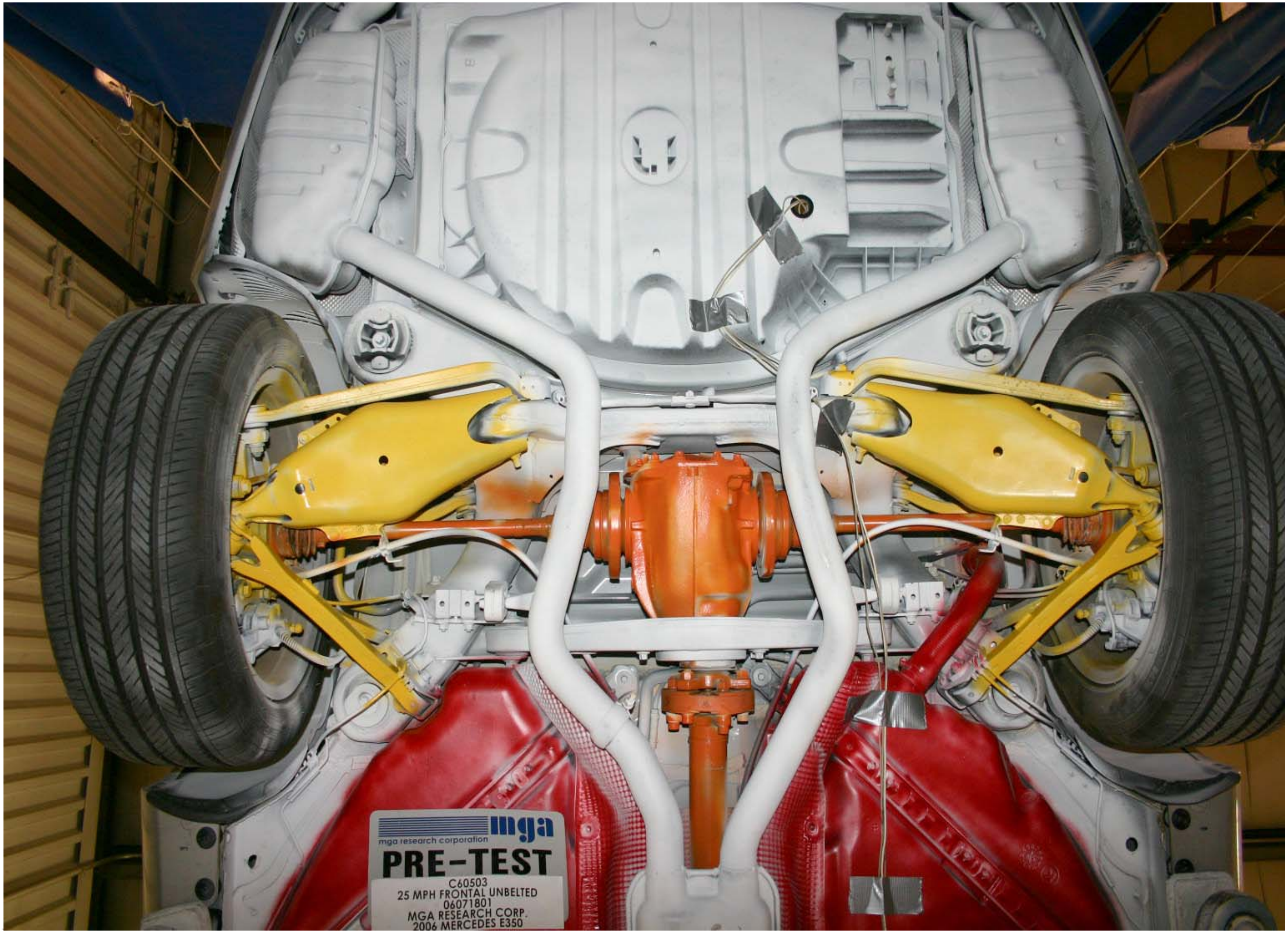
Post-Test Mid Underbody View



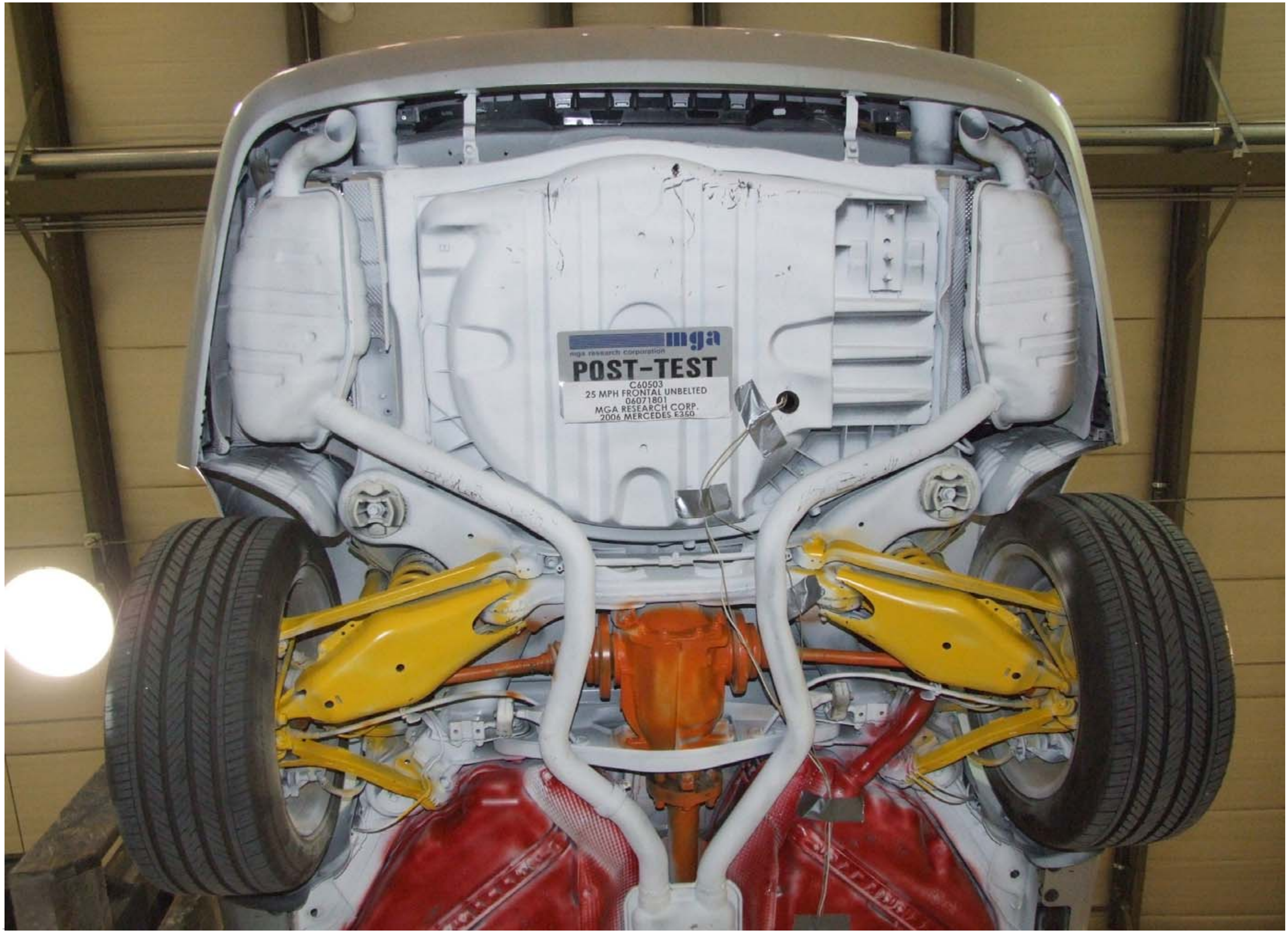
Pre-Test Mid Rear Underbody View



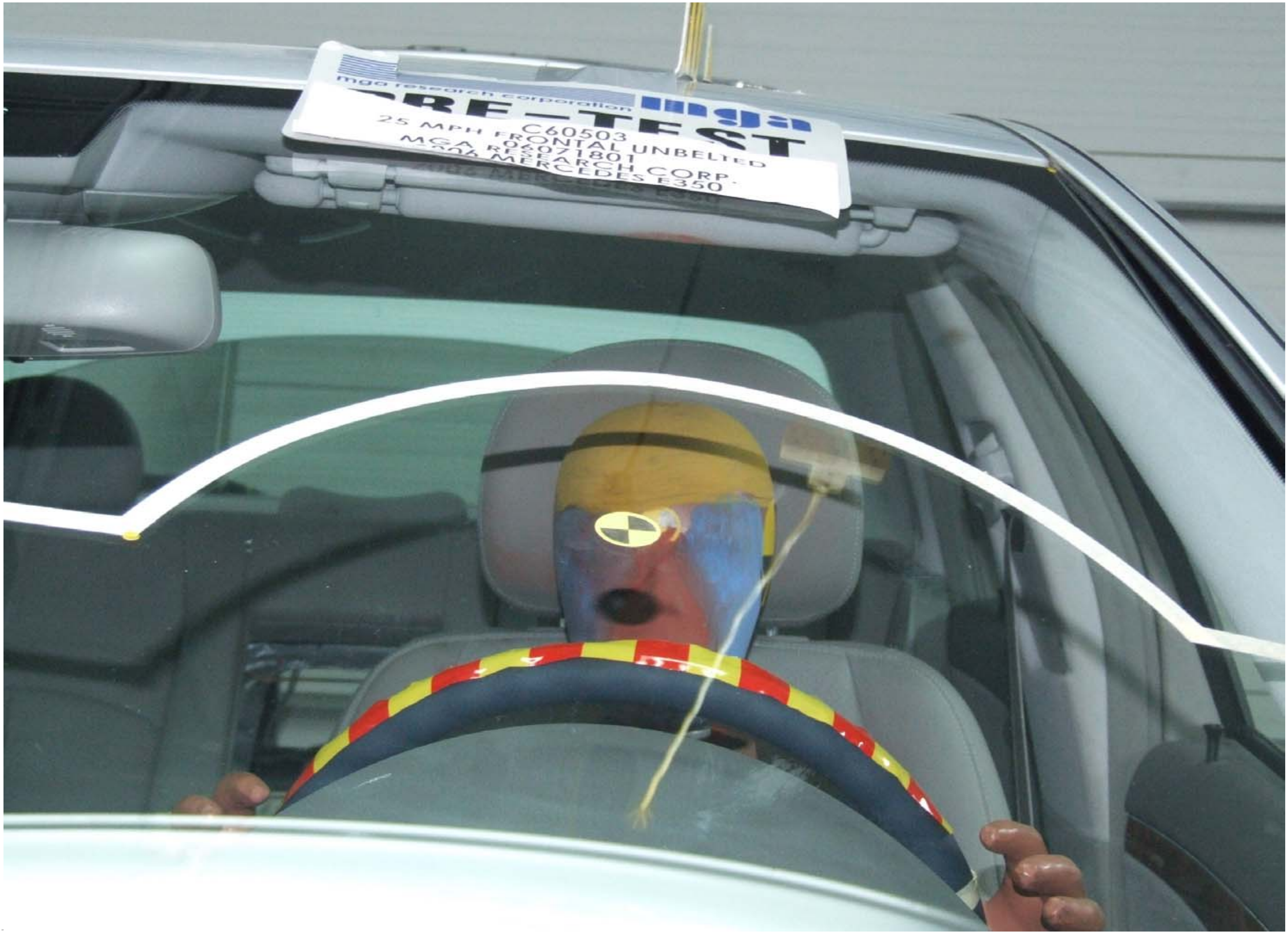
Post-Test Mid Rear Underbody View



Pre-Test Rear Underbody View



Post-Test Rear Underbody View



Pre-Test Driver Dummy Front View (head position)

Post-Test Driver Dummy Front View (head position)

Pre-Test Driver Dummy Position Left Side View

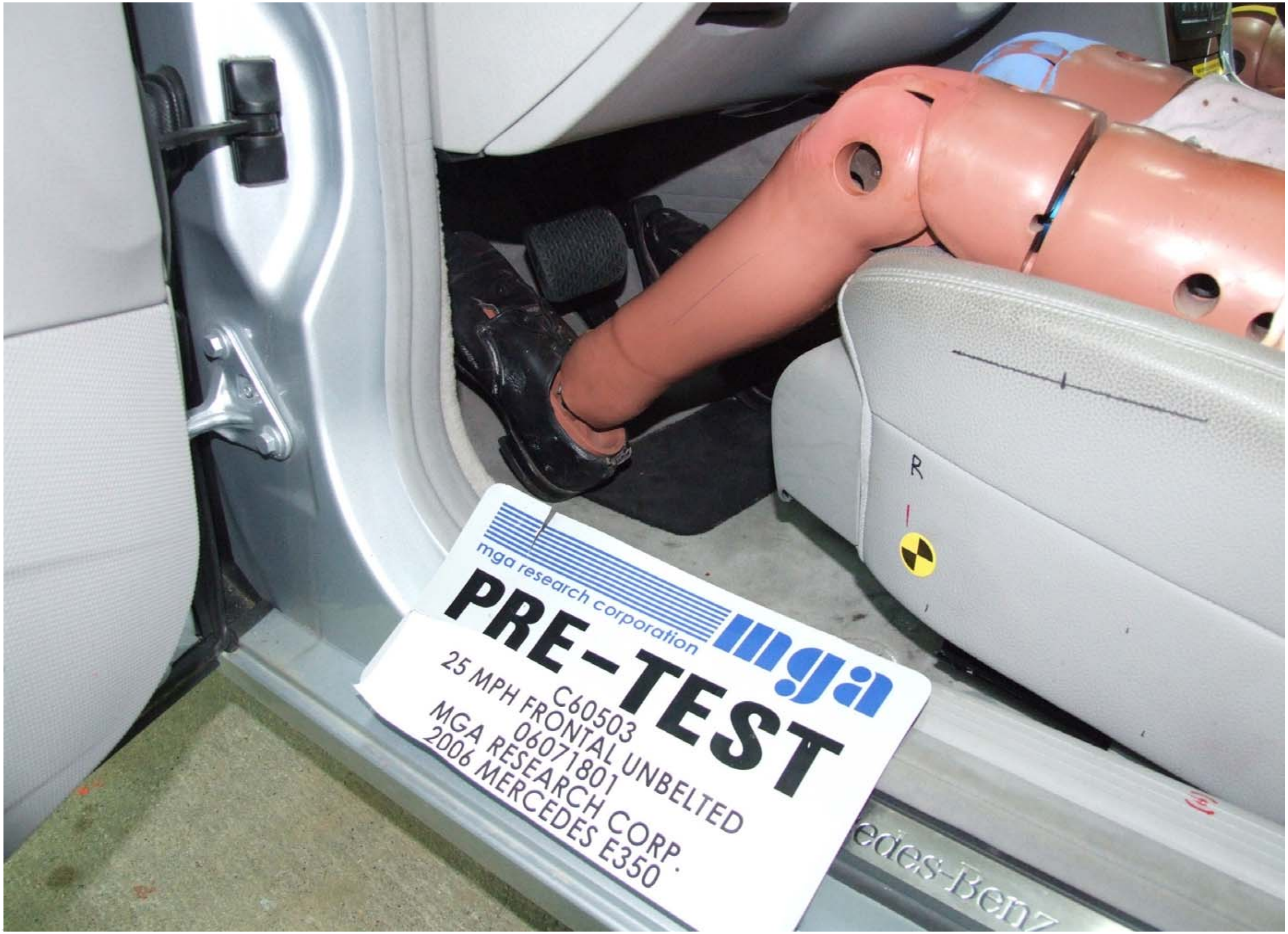
Post-Test Driver Dummy Position Left Side View

Pre-Test Driver Dummy Position Left Side View (Door Open)

Post-Test Driver Dummy Position Left Side View (Door Open)

Pre-Test Driver Dummy Seat Position

Post-Test Driver Dummy Seat Position



Pre-Test Driver Dummy Feet Position

Post-Test Driver Dummy Feet Position

Pre-Test Driver Side Knee Bolster View

Post-Test Driver Side Knee Bolster View

Post-Test Driver Dummy Head Contact (head rest)

Post-Test Driver Dummy Head Contact (visor)

Post-Test Driver Dummy Knee Contact

Post-Test Driver Dummy Airbag Contact

Pre-Test Passenger Dummy Front View (head position)

Post-Test Passenger Dummy Front View (head position)

Pre-Test Passenger Dummy Position Right Side View

Post-Test Passenger Dummy Position Right Side View

Pre-Test Passenger Dummy Position Right Side View (Door Open)

Post-Test Passenger Dummy Position Right Side View (Door Open)

Pre-Test Passenger Dummy Seat Position

Post-Test Passenger Dummy Seat Position

Pre-Test Passenger Dummy Feet Position

Post-Test Passenger Dummy Feet Position

Pre-Test Passenger Side Knee Bolster View

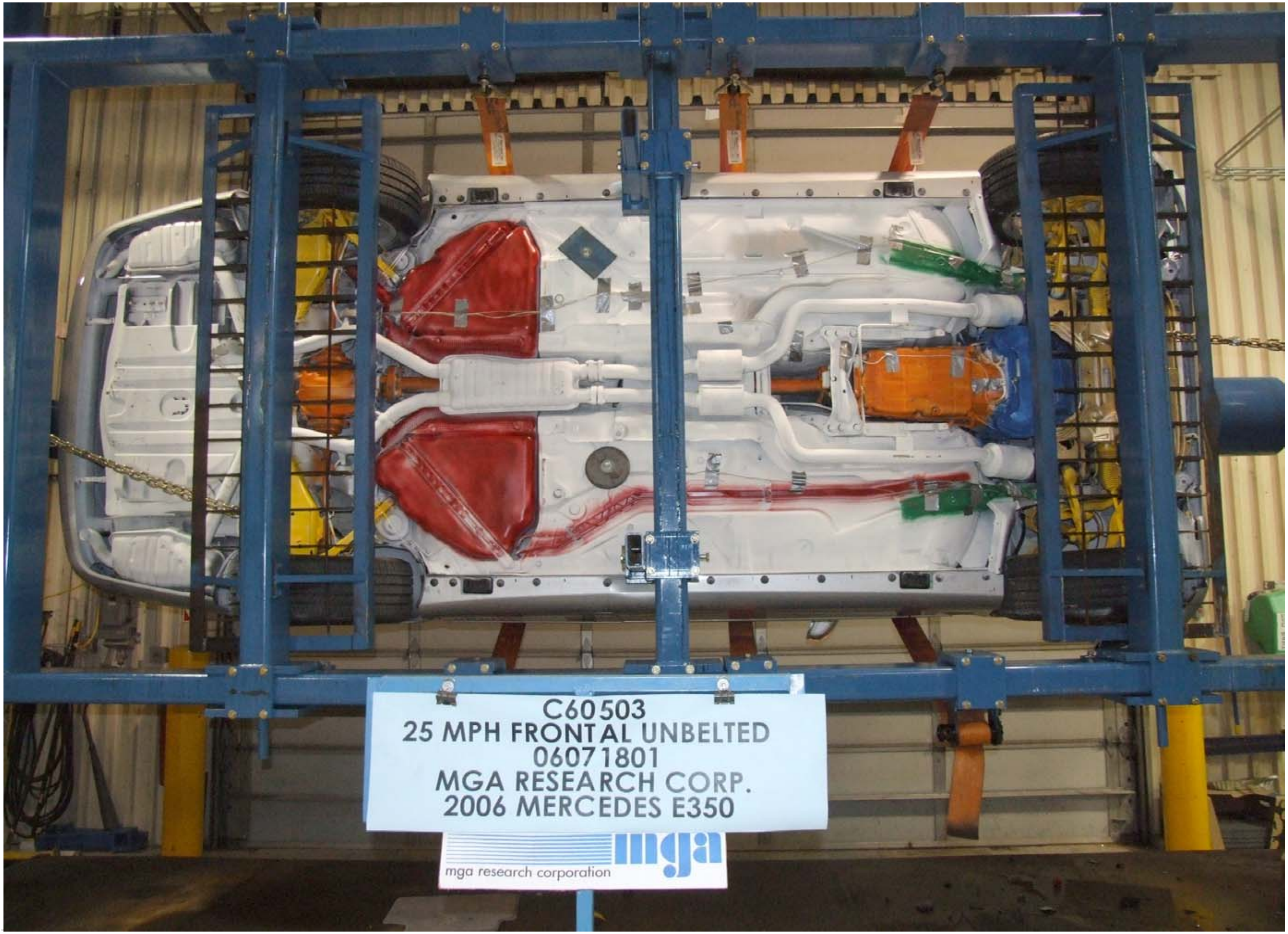
Post-Test Passenger Side Knee Bolster View

Post-Test Passenger Dummy Knee Contact

Post-Test Passenger Dummy Airbag Contact

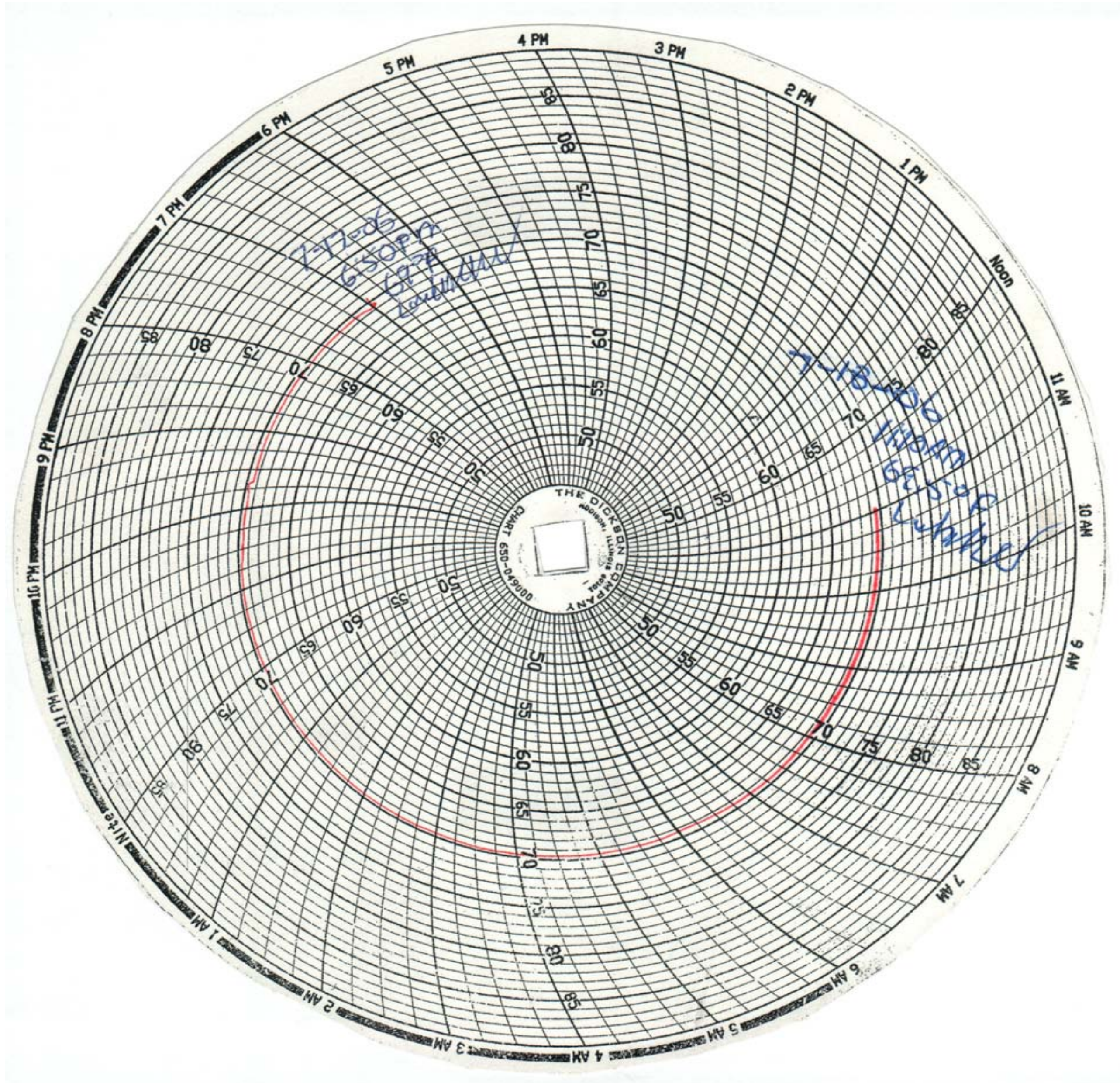
Rollover 90 Degrees

Rollover 180 Degrees



Rollover 270 Degrees

Rollover 360 Degrees



Temperature Plot

Vehicle in Relation to The Load Cell Grid

APPENDIX D

LOW RISK PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Page No.

Pre-Test 5th Fem. P1 Driver Dummy Left Side View (Door Open)

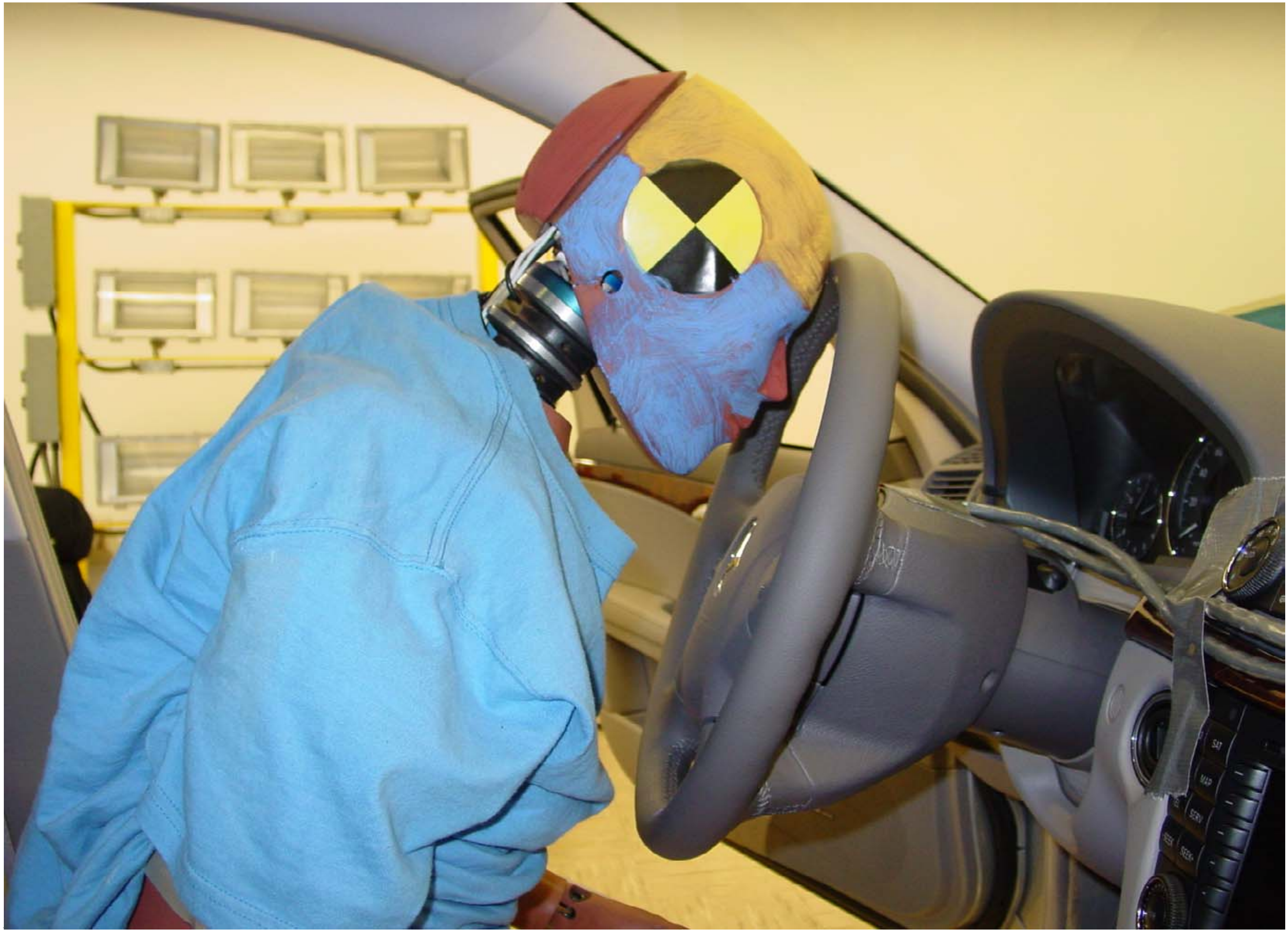
Post-Test 5th Fem. P1 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P1 Driver Dummy Right Side View (Door Open)

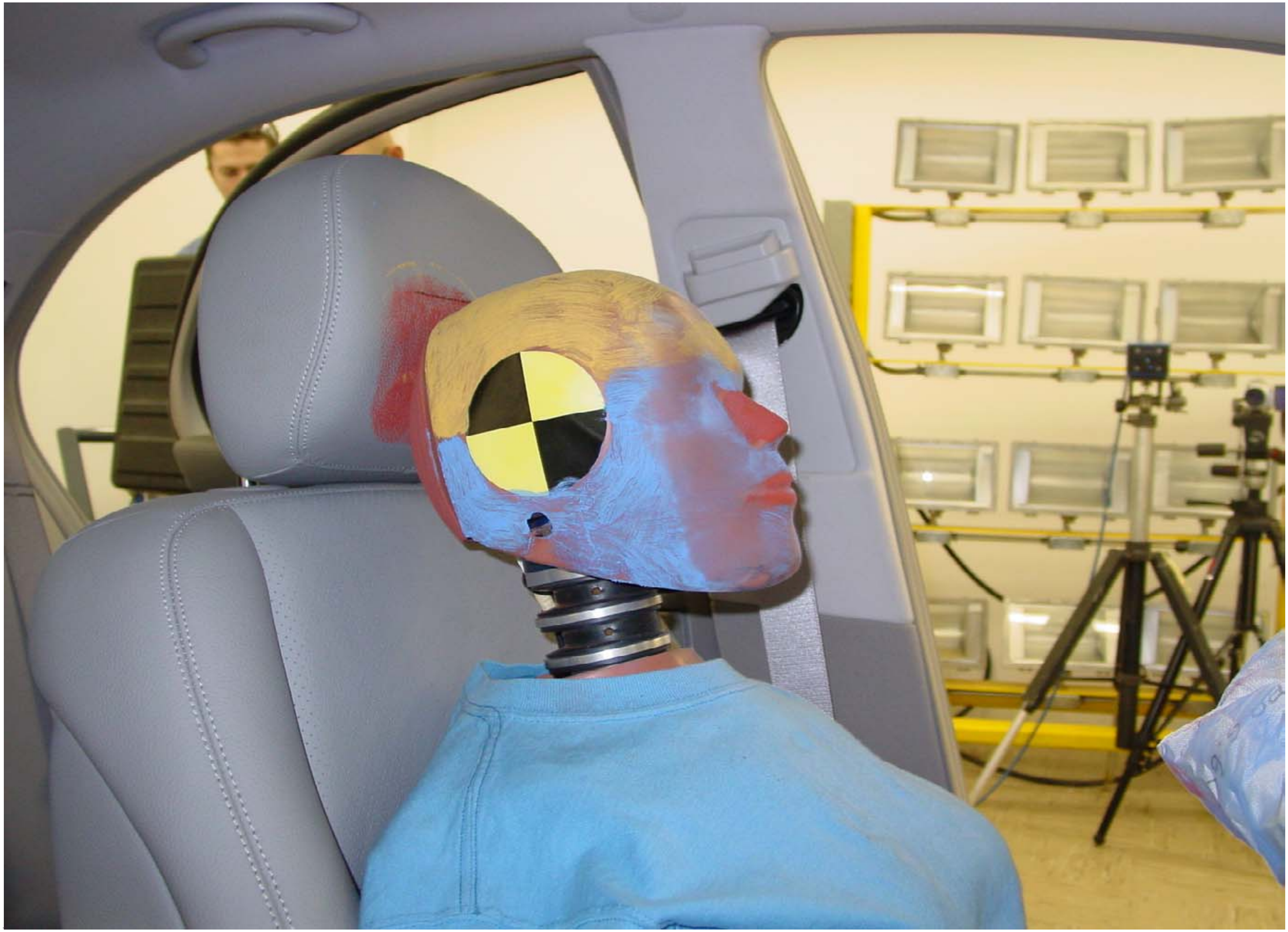
Post-Test 5th Fem. P1 Driver Dummy Right Side View (Door Open)

Pre-Test 5th Fem. P1 Driver Dummy Left Side Head Position View

Post-Test 5th Fem. P1 Driver Dummy Left Side Head Position View



Pre-Test 5th Fem. P1 Driver Dummy Right Side Head Position View



Post-Test 5th Fem. P1 Driver Dummy Right Side Head Position View

Pre-Test 5th Fem. P1 Driver Dummy Left Side Mid Position View

Post-Test 5th Fem. P1 Driver Dummy Left Side Mid Position View

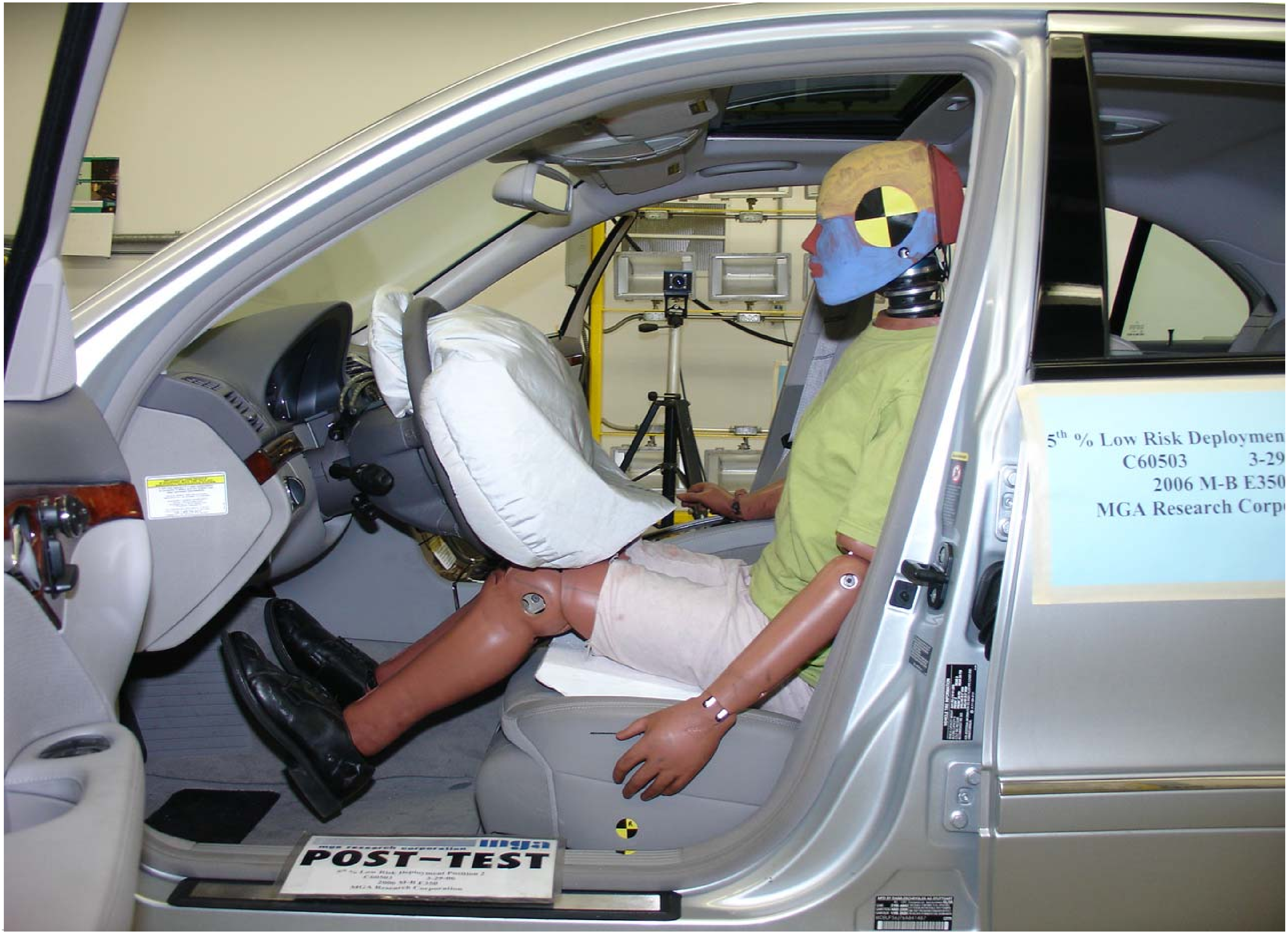
Pre-Test 5th Fem. P1 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P1 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P1 Driver Dummy Airbag Left View

Post-Test 5th Fem. P1 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Driver Dummy Left Side View (Door Open)



Post-Test 5th Fem. P2 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Driver Dummy Right Side View (Door Open)

Pre-Test 5th Fem. P2 Driver Dummy Left Side Head Position View

Post-Test 5th Fem. P2 Driver Dummy Left Side Head Position View

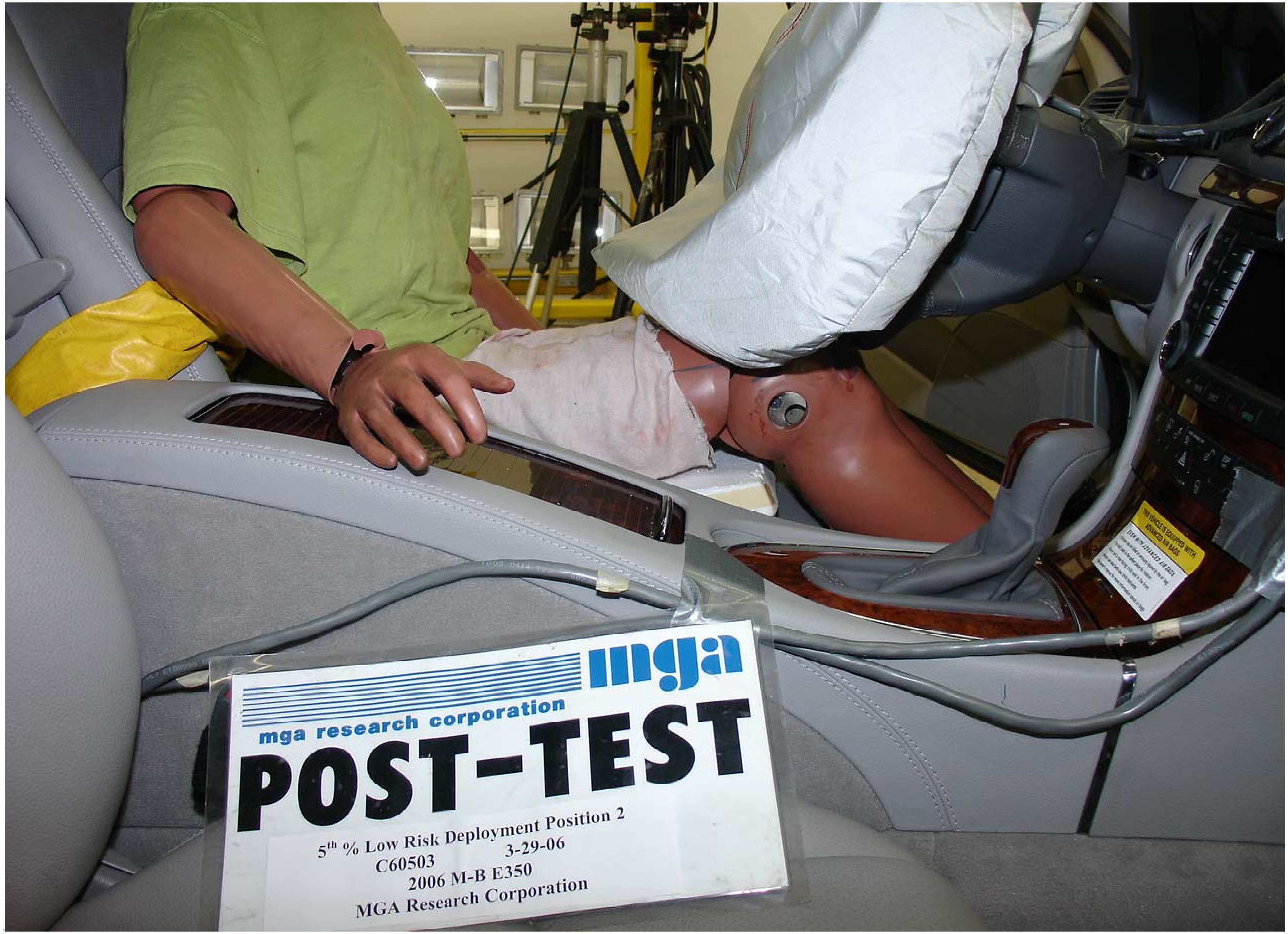
Pre-Test 5th Fem. P2 Driver Dummy Right Side Head Position View

Post-Test 5th Fem. P2 Driver Dummy Right Side Head Position View

Pre-Test 5th Fem. P2 Driver Dummy Left Side Mid Position View

Post-Test 5th Fem. P2 Driver Dummy Left Side Mid Position View

Pre-Test 5th Fem. P2 Driver Dummy Right Side Mid Position View



Post-Test 5th Fem. P2 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Driver Dummy Airbag Right View

Post-Test 5th Fem. P2 Driver Dummy Head Contact View (visor)

Pre-Test 3YO P1 Passenger Dummy Left Side View (Door Open)

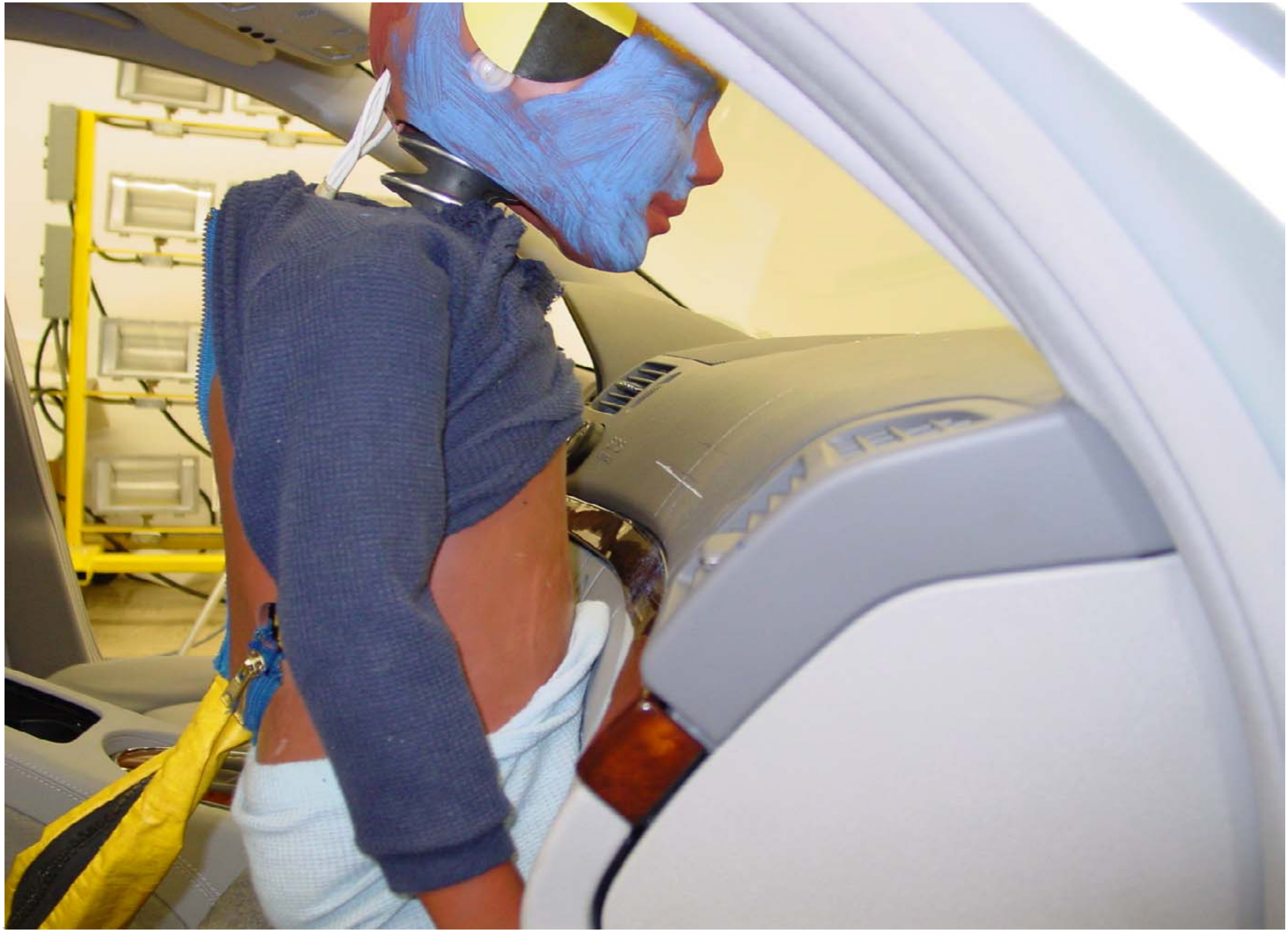
Post-Test 3YO P1 Passenger Dummy Left Side View (Door Open)

Pre-Test 3YO P1 Passenger Dummy Right Side View (Door Open)

Post-Test 3YO P1 Passenger Dummy Right Side View (Door Open)

Pre-Test 3YO P1 Passenger Dummy Left Three-Quarter Upper View

Post-Test 3YO P1 Passenger Dummy Left Three-Quarter Upper View



Pre-Test 3YO P1 Passenger Dummy Right Three-Quarter Upper View

Post-Test 3YO P1 Passenger Dummy Right Three-Quarter Upper View

Pre-Test 3YO P1 Passenger Dummy Right Side Mid Position View

Post-Test 3YO P1 Passenger Dummy Airbag Contact Left View

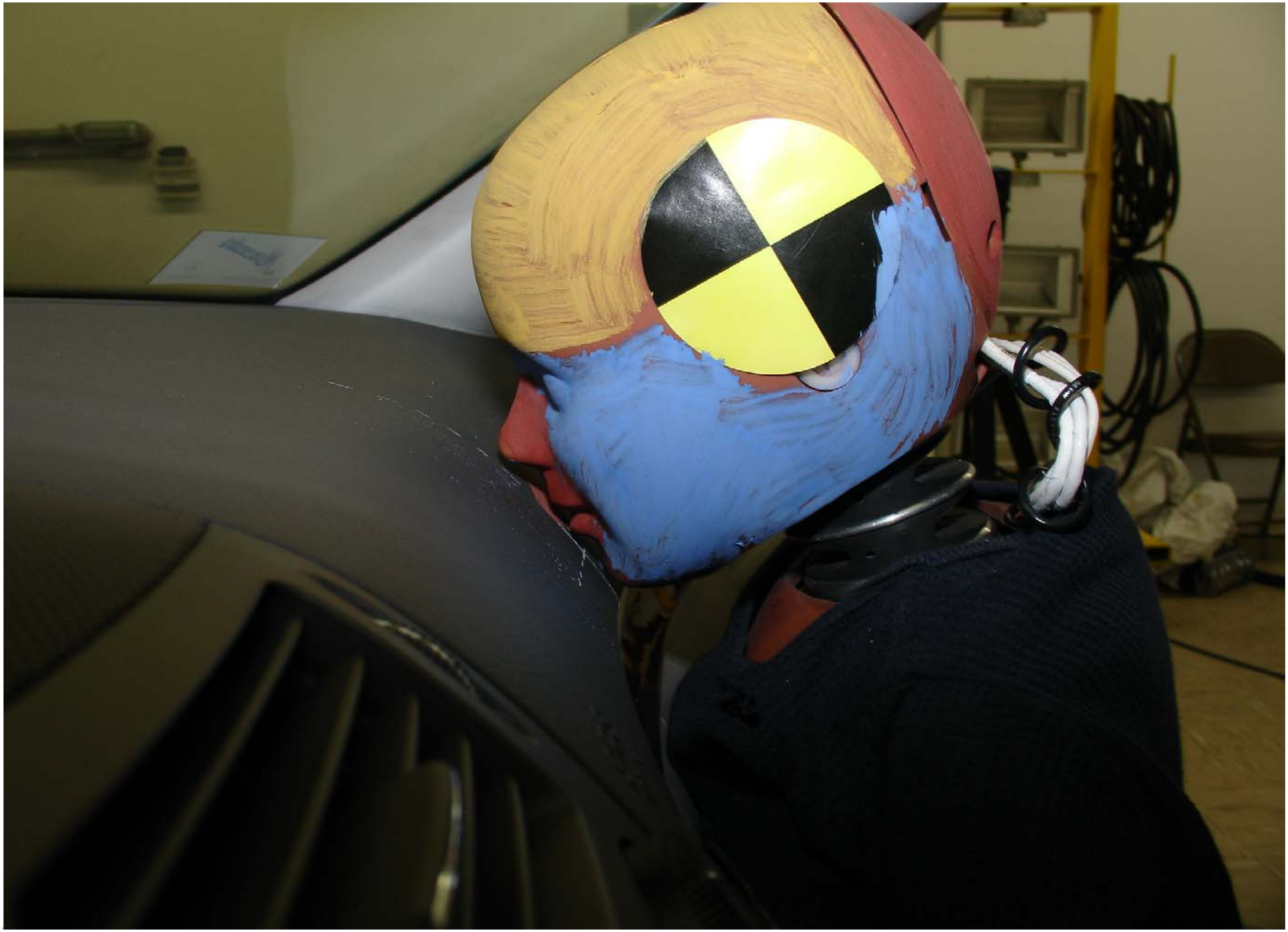
Post-Test 3YO P1 Passenger Dummy Airbag Contact Right View

Pre-Test 3YO P2 Passenger Dummy Right Side View (Door Open)

Post-Test 3YO P2 Passenger Dummy Right Side View (Door Open)

Pre-Test 3YO P2 Passenger Dummy Left Side View (Door Open)

Post-Test 3YO P2 Passenger Dummy Left Side View (Door Open)



Pre-Test 3YO P2 Passenger Dummy Left Three-Quarter Upper View

Post-Test 3YO P2 Passenger Dummy Left Three-Quarter Upper View

Pre-Test 3YO P2 Passenger Dummy Right Three-Quarter Upper View

Post-Test 3YO P2 Passenger Dummy Right Three-Quarter Upper View

Pre-Test 3YO P2 Passenger Dummy Right Side Feet Position View

Post-Test 3YO P1 Passenger Dummy Airbag Contact Left View

Post-Test 3YO P1 Passenger Dummy Airbag Contact Right View

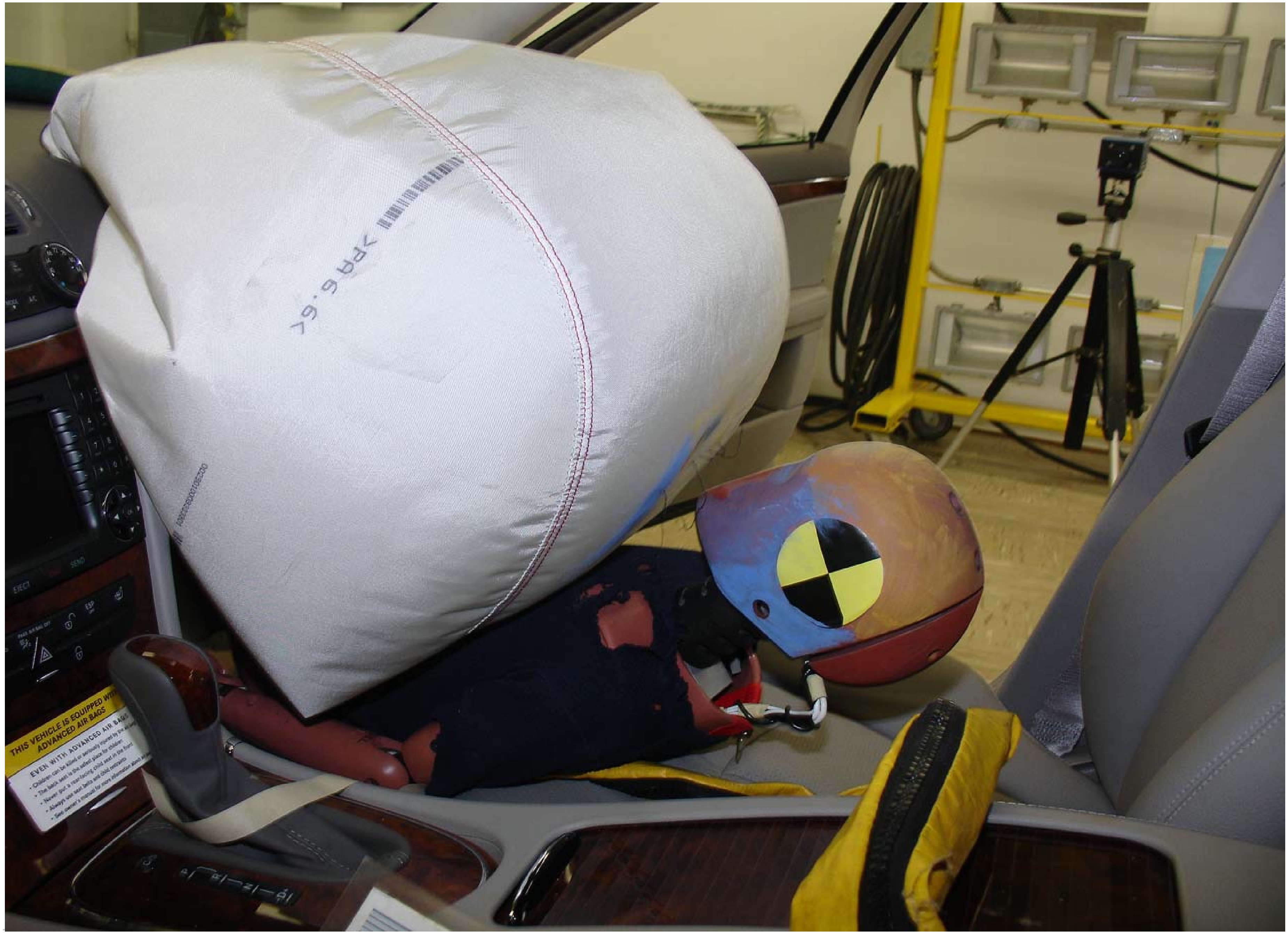
Pre-Test 6YO P1 Passenger Dummy Left Side View (Door Open)

Post-Test 6YO P1 Passenger Dummy Left Side View (Door Open)

Pre-Test 6YO P1 Passenger Dummy Right Side View (Door Open)

Post-Test 6YO P1 Passenger Dummy Right Side View (Door Open)

Pre-Test 6YO P1 Passenger Dummy Left Three-Quarter Upper View

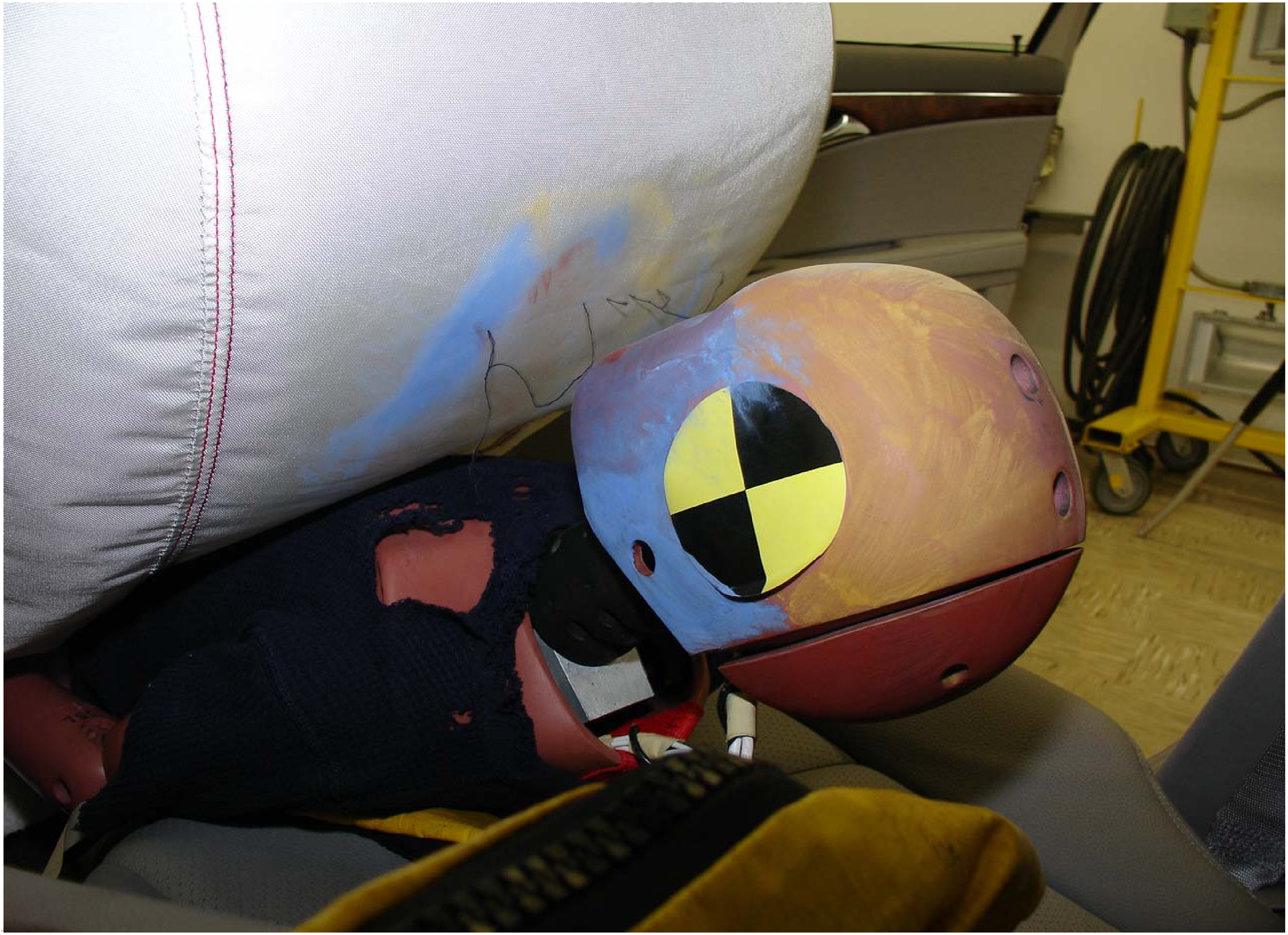


Post-Test 6YO P1 Passenger Dummy Left Three-Quarter Upper View

Post-Test 6YO P1 Passenger Dummy Right Three-Quarter Upper View

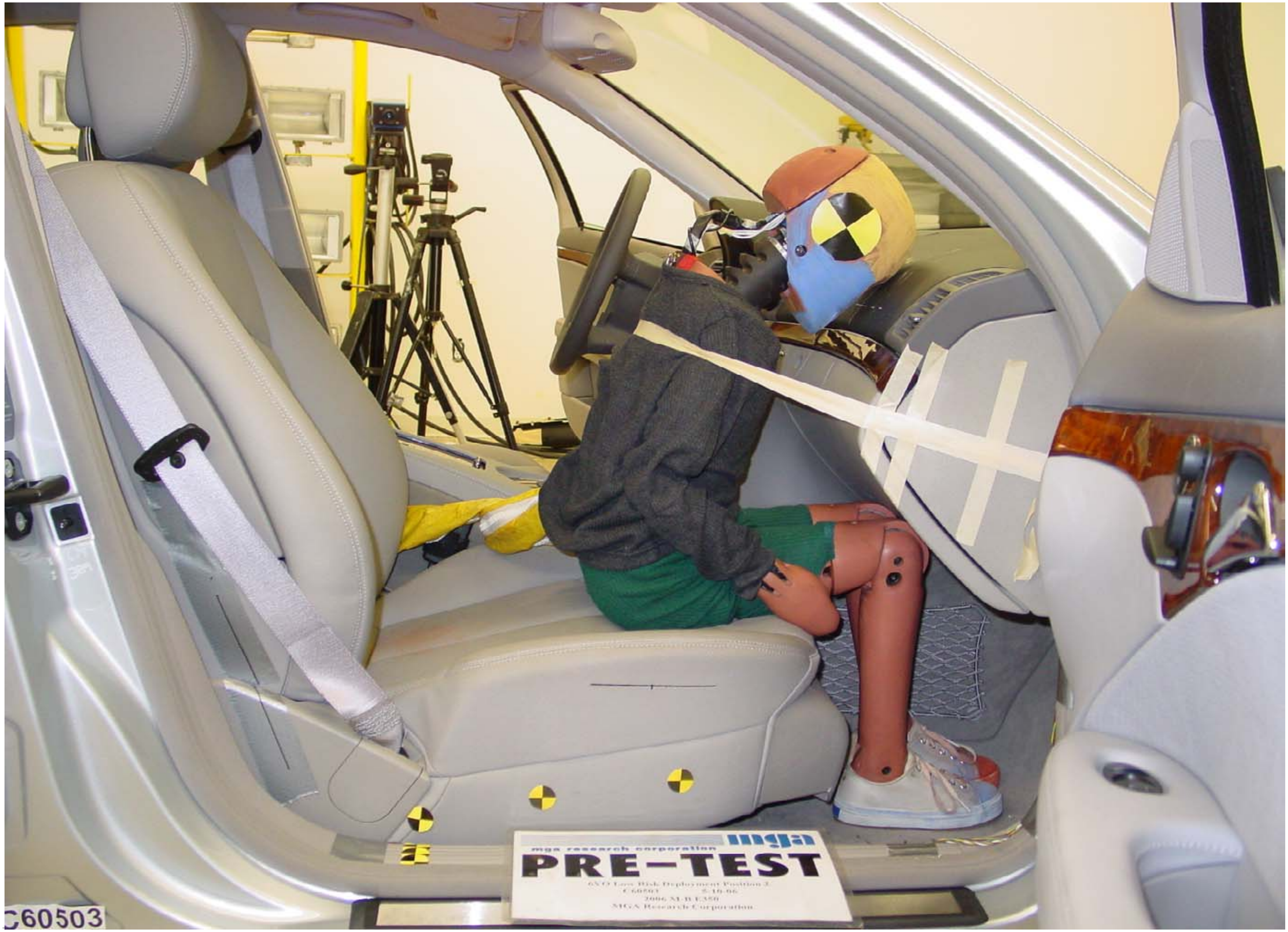
Pre-Test 6YO P1 Passenger Dummy Right Side Mid Position View

Post-Test 6YO P1 Passenger Dummy Head Contact View (seat back)



Post-Test 6YO P1 Passenger Dummy Airbag Contact Left View

Post-Test 6YO P1 Passenger Dummy Airbag Contact Right View

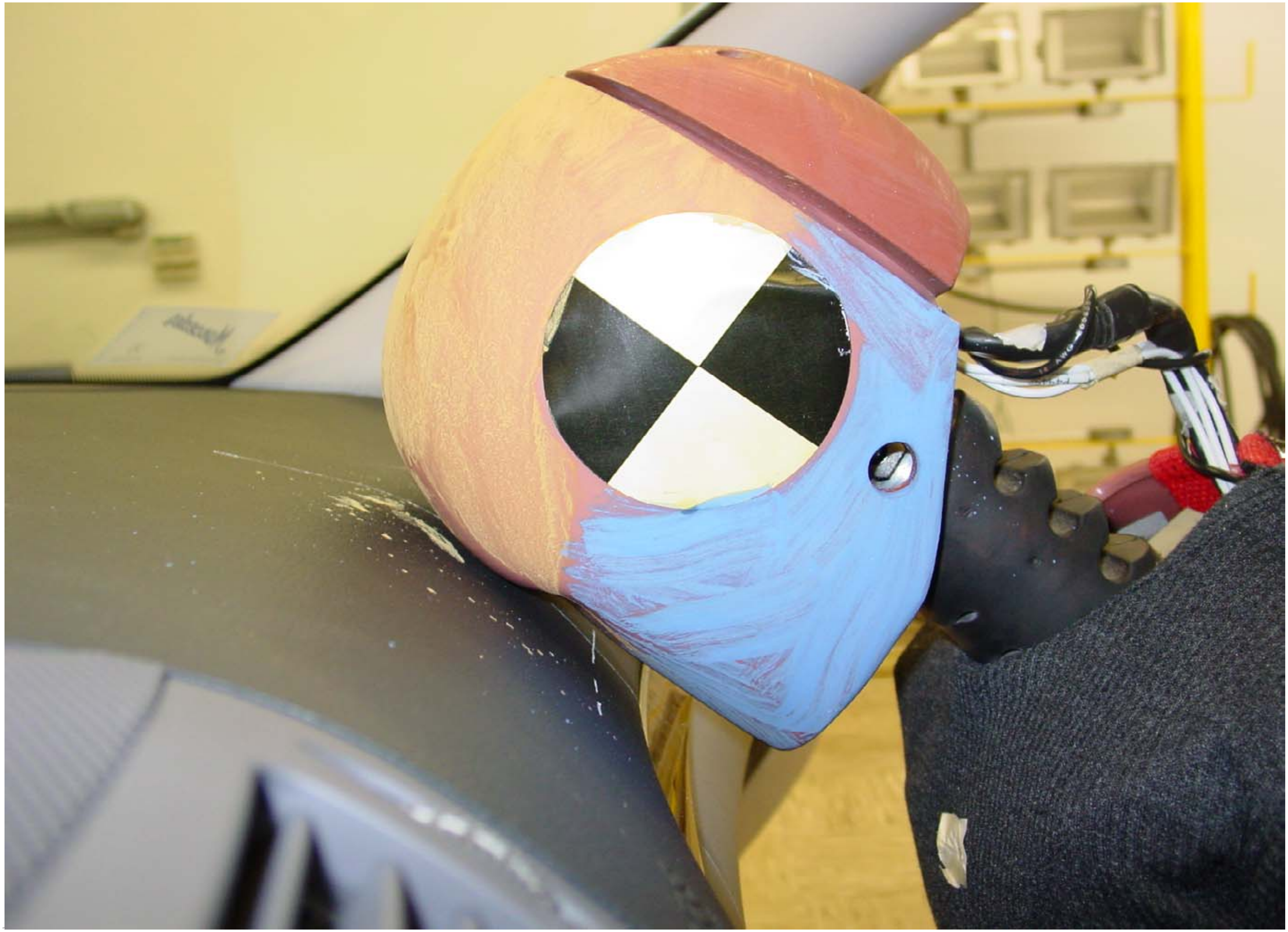


Pre-Test 6YO P2 Passenger Dummy Right Side View (Door Open)

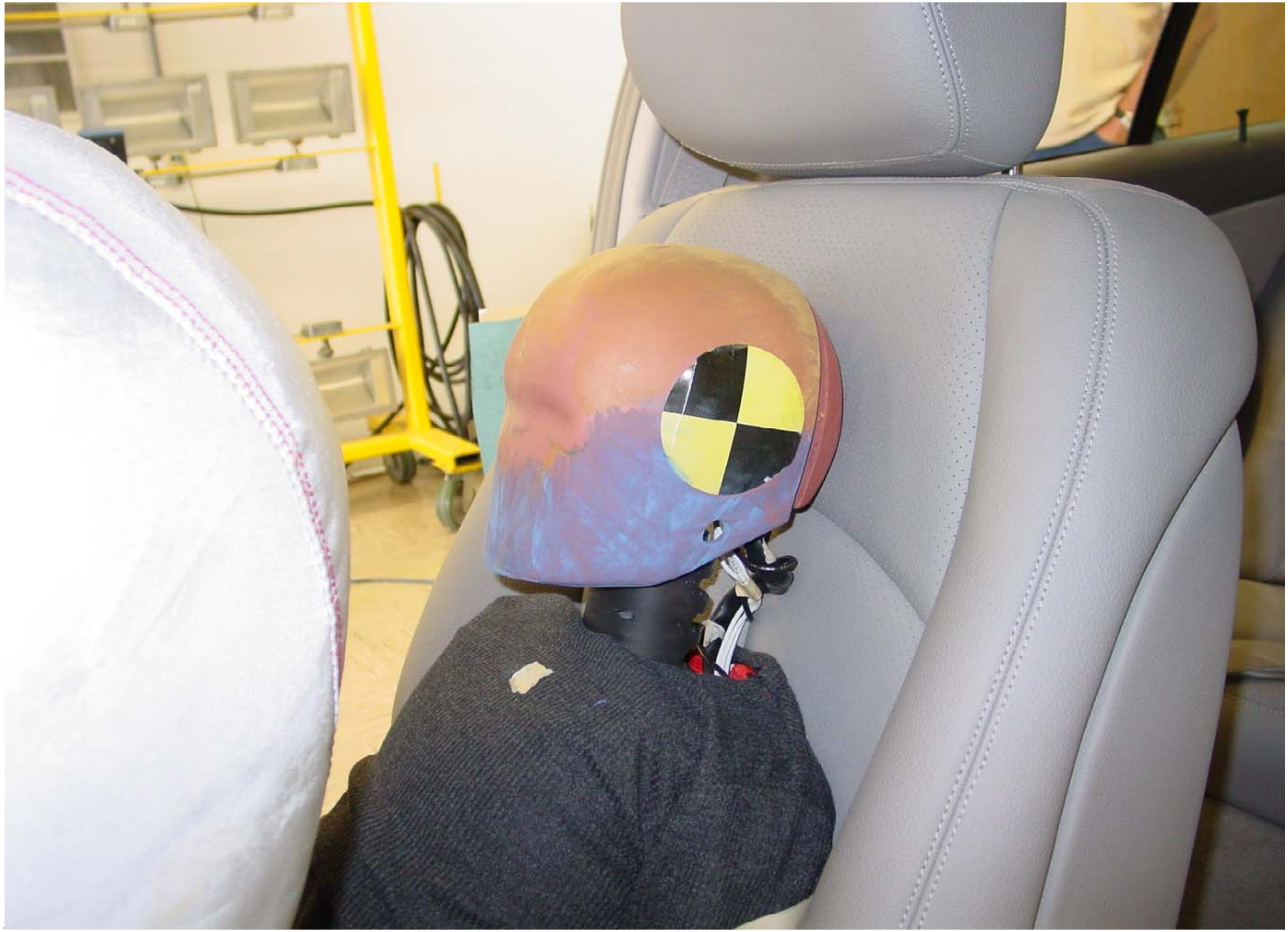
Post-Test 6YO P2 Passenger Dummy Right Side View (Door Open)

Pre-Test 6YO P2 Passenger Dummy Left Side View (Door Open)

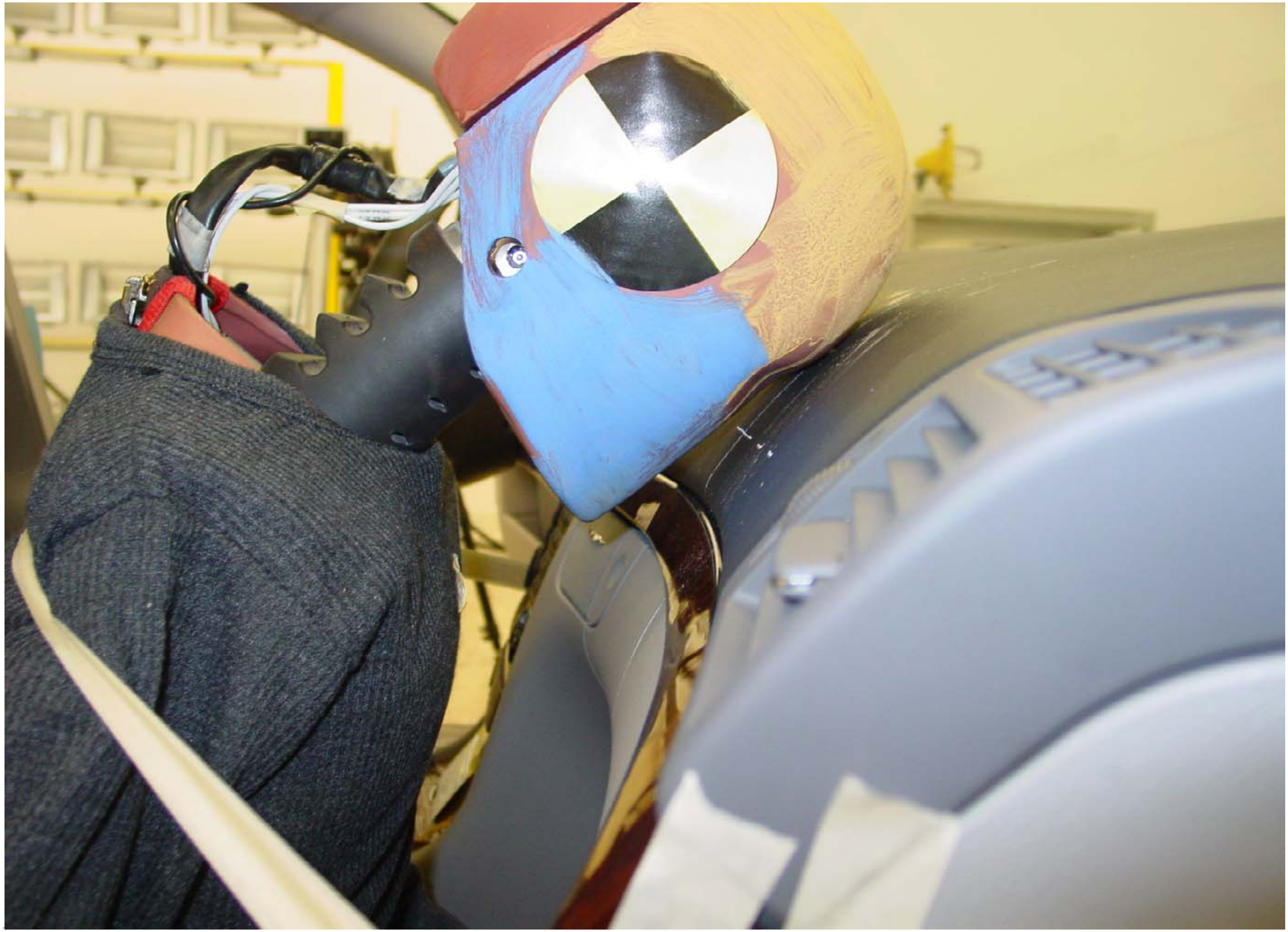
Post-Test 6YO P2 Passenger Dummy Left Side View (Door Open)



Pre-Test 6YO P2 Passenger Dummy Left Three-Quarter Upper View



Post-Test 6YO P2 Passenger Dummy Left Three-Quarter Upper View



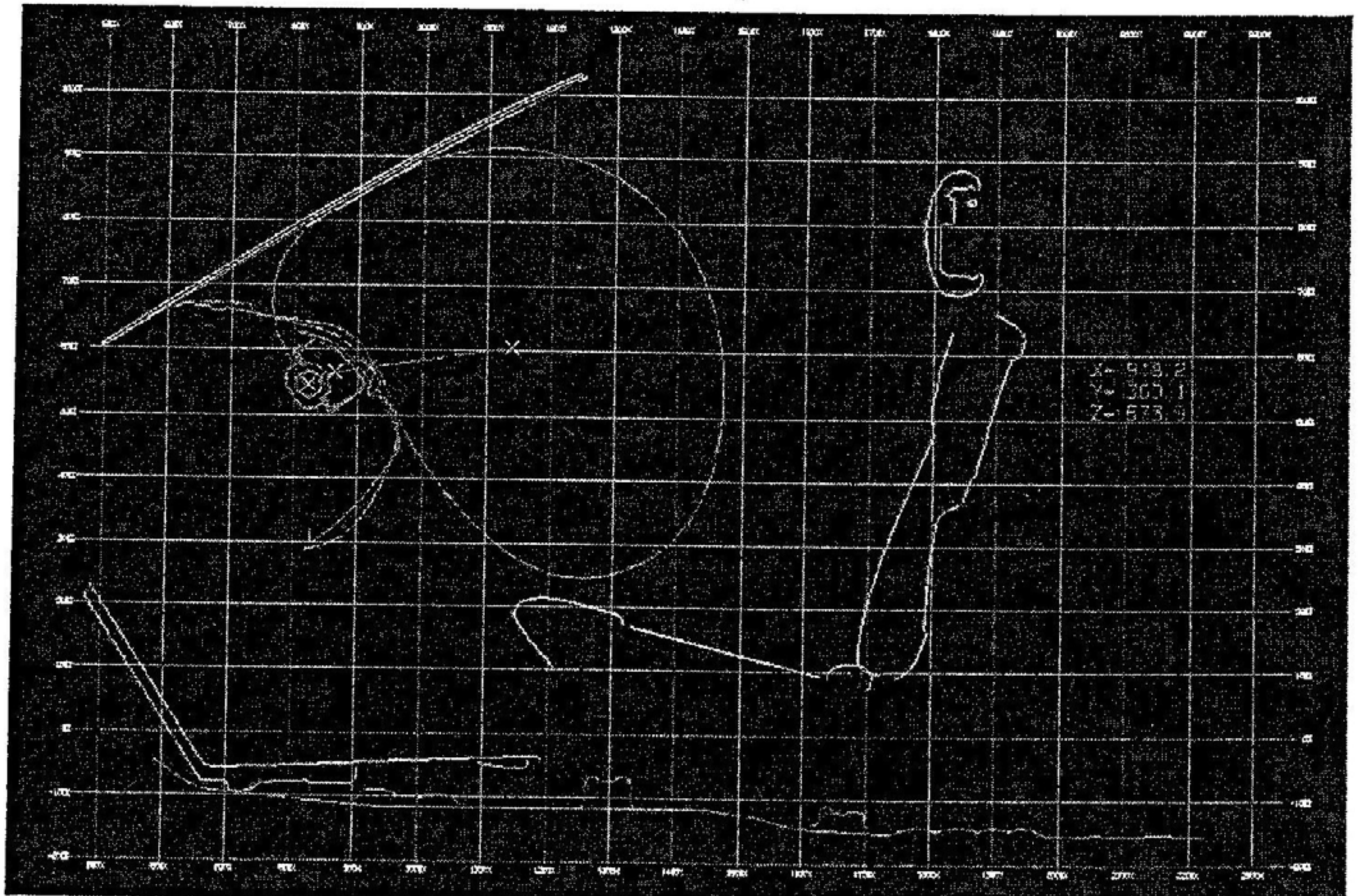
Pre-Test 6YO P2 Passenger Dummy Right Three-Quarter Upper View

Post-Test 6YO P2 Passenger Dummy Right Three-Quarter Upper View

Post-Test 6YO P2 Passenger Dummy Airbag Contact Left View

Post-Test 6YO P2 Passenger Dummy Airbag Contact Right View

The location of the point defined by the intersection of the instrument panel and a line between the volumetric center of the smallest volume that can encompass the folded undeployed air bag and volumetric center of the statically inflated air bag. (S22.4.1.2 & S24.4.1.2)



X- 918.2
Y-360.1
Z-573.9

Passenger Geometric Center (2006 Mercedes E350)

APPENDIX E
SUPPRESSION PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

Newborn Section A Car Bed


Cosco Dream Ride Car Bed With Belt, Forward Seat Track


Cosco Dream Ride Car Bed With Belt, Middle Seat Track


Cosco Dream Ride Car Bed With Belt,
Rearward Seat Track


Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section B Rear Facing CRS

Britax Handle With Care 191 With Belt, Forward Seat Track, Handle Down

Britax Handle With Care 191 With Belt, Middle Seat Track, Handle Down

Britax Handle With Care 191 With Belt, Rearward Seat Track, Handle Down

Britax Handle With Care 191 Unbelted, Forward Seat Track, Handle Down

Britax Handle With Care 191 Unbelted, Middle Seat Track, Handle Down

Britax Handle With Care 191 Unbelted, Rearward Seat Track, Handle Down

Britax Handle With Care 191 Fwd Facing Unbelted, Forward Seat Track, Handle Down

Britax Handle With Care 191 Fwd Facing Unbelted, Middle Seat Track, Handle Down

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section B Rear Facing CRS

Britax Handle With Care 191 Fwd Facing Unbelted,
Rearward Seat Track, Handle Down

Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section C Rear Facing CRS

Evenflo First Choice 204 With Belt, Forward Seat Track, Handle Up

Evenflo First Choice 204 With Belt, Middle Seat Track, Handle Down

Evenflo First Choice 204 With Belt, Rearward Seat Track, Handle Down

Evenflo First Choice 204 Unbelted, Forward Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Rear Facing CRS

Evenflo First Choice 204 Unbelted, Middle Seat Track, Handle Up

Evenflo First Choice 204 Unbelted, Rearward Seat Track, Handle Down

Evenflo First Choice 204 Fwd Facing Unbelted, Forward Seat Track, Handle Up

Evenflo First Choice 204 Fwd Facing Unbelted, Middle Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Rear Facing CRS

Evenflo First Choice 204 Fwd Facing Unbelted,
Rearward Seat Track, Handle Up

Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section B Rear Facing CRS

Graco Infant W/ Base With Belt, Forward Seat Track, Handle Up

Graco Infant W/ Base With Belt, Middle Seat Track, Handle Up

Graco Infant W/ Base With Belt, Rearward Seat Track, Handle Up

Graco Infant W/ Base Unbelted, Forward Seat Track, Handle Up

Graco Infant W/ Base Unbelted, Middle Seat Track, Handle Up

Graco Infant W/ Base Unbelted, Rearward Seat Track, Handle Up

Graco Infant W/ Base Fwd Facing Unbelted, Forward Seat Track, Handle Up

Graco Infant W/ Base Fwd Facing Unbelted, Middle Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section B Rear Facing CRS

Graco Infant W/ Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Up

Graco Infant W/O Base With Belt,
Forward Seat Track, Handle Up

Graco Infant W/O Base With Belt, Middle Seat Track,
Handle Up

Graco Infant W/O Base With Belt, Rearward Seat Track,
Handle Down

Graco Infant W/O Base Unbelted, Forward Seat Track, Handle Up

Graco Infant W/O Base Unbelted, Middle Seat Track, Handle Up

Graco Infant W/O Base Unbelted, Rearward Seat Track, Handle Down

Graco Infant W/O Base Fwd Facing Unbelted, Forward Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section B Rear Facing CRS

Graco Infant W/O Base Fwd Facing Unbelted,
Middle Seat Track, Handle Down

Graco Infant W/O Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Down

Unbelted 5th Percentile Female Reactivation, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section C Forward Facing Convertible CRS

Britax Roundabout 161 Fwd Facing With Belt,
Forward Seat Track

Britax Roundabout 161 Fwd Facing With Belt,
Middle Seat Track

Britax Roundabout 161 Fwd Facing With Belt,
Rearward Seat Track

Britax Roundabout 161 Fwd Facing Unbelted,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Forward Facing Convertible CRS

Britax Roundabout 161 Fwd Facing Unbelted,
Middle Seat Track

Britax Roundabout 161 Fwd Facing Unbelted,
Rearward Seat Track

Britax Roundabout 161 Rear Facing With Belt,
Forward Seat Track

Britax Roundabout 161 Rear Facing With Belt,
Middle Seat Track

Britax Roundabout 161 Rear Facing With Belt,
Rearward Seat Track

Britax Roundabout 161 Rear Facing Unbelted,
Forward Seat Track

Britax Roundabout 161 Rear Facing Unbelted,
Middle Seat Track

Britax Roundabout 161 Rear Facing Unbelted,
Rearward Seat Track

Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old Section C Forward Facing Convertible CRS

Century Encore Fwd Facing With Belt, Forward Seat Track

Century Encore Fwd Facing With Belt, Middle Seat Track

Century Encore Fwd Facing With Belt, Rearward Seat Track

Century Encore Fwd Facing Unbelted, Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Forward Facing Convertible CRS

Century Encore Fwd Facing Unbelted, Middle Seat Track

Century Encore Fwd Facing Unbelted, Rearward Seat Track

Century Encore Rear Facing With Belt, Forward Seat Track

Century Encore Rear Facing With Belt, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Forward Facing Convertible CRS

Century Encore Rear Facing With Belt, Rearward Seat Track

Century Encore Rear Facing Unbelted, Forward Seat Track

Century Encore Rear Facing Unbelted, Middle Seat Track

Century Encore Rear Facing Unbelted, Rearward Seat Track

Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Mercedes E350 (C60503)

12 Month Old | Section C | Forward Facing Convertible CRS

Evenflo Medallion 254 Fwd Facing With Belt, Forward Seat Track


Evenflo Medallion 254 Fwd Facing With Belt, Middle Seat Track

Evenflo Medallion 254 Fwd Facing With Belt,
Rearward Seat Track

Evenflo Medallion 254 Fwd Facing Unbelted,
Forward Seat Track

Evenflo Medallion 254 Fwd Facing Unbelted,
Middle Seat Track

Evenflo Medallion 254 Fwd Facing Unbelted,
Rearward Seat Track

Evenflo Medallion 254 Rear Facing With Belt,
Forward Seat Track

Evenflo Medallion 254 Rear Facing With Belt,
Middle Seat Track

Evenflo Medallion 254 Rear Facing With Belt, Rearward Seat Track

Evenflo Medallion 254 Rear Facing Unbelted, Forward Seat Track

Evenflo Medallion 254 Rear Facing Unbelted, Middle Seat Track

Evenflo Medallion 254 Rear Facing Unbelted, Rearward Seat Track

Unbelted 5th Percentile Female Reactivation, Middle Seat Track

APPENDIX F

INSTRUMENTATION CALIBRATION

INSTRUMENTS FOR DRIVER DUMMY NO. 505

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	A07-J05	Entran	04/11/06
Head Y	G22-L04	Entran	04/26/06
Head Z	J23-M09	Entran	04/26/06
Neck Load Cell	1021	Denton	04/25/06
Chest X	J13709	Endevco	05/24/06
Chest Y	J17709	Endevco	05/24/06
Chest Z	J13541	Endevco	05/24/06
Chest Displacement	505	Servo	02/08/06
Left Femur Load Cell	84	Denton	07/14/06
Right Femur Load Cell	83	Denton	07/14/06

INSTRUMENTS FOR PASSENGER DUMMY NO. 510

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P49471	Endevco	04/04/06
Head Y	P49480	Endevco	04/04/06
Head Z	P49468	Endevco	04/04/06
Neck Load Cell	650	Denton	04/27/06
Chest X	J23-M06	Entran	04/04/06
Chest Y	J23-M07	Entran	04/04/06
Chest Z	J23-M03	Entran	04/04/06
Chest Displacement	510	Servo	02/08/06
Left Femur Load Cell	1360	Denton	06/08/06
Right Femur Load Cell	1359	Denton	06/08/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 081 (P1)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	A29-M05	Entran	09/13/05
Head Y	P27008	Endevco	09/13/05
Head Z	A29-F20	Entran	09/13/05
Neck Load Cell	1673	Denton	01/06/06
Chest X	A27-Z12	Entran	01/04/06
Chest Y	L02-Z02	Entran	01/19/06
Chest Z	AJ8Y6	Endevco	01/18/06
Chest Displacement	081	Servo	11/23/05
Left Femur Load Cell	959	GSE	02/08/06
Right Femur Load Cell	950	GSE	02/08/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 081 (P2)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P27008	Endevco	02/28/06
Head Y	A29-F20	Entran	02/28/06
Head Z	A29-M05	Entran	02/28/06
Neck Load Cell	1561	Denton	02/28/06
Chest X	L02-Z43	Entran	01/19/06
Chest Y	L02-Z42	Entran	01/19/06
Chest Z	L02-Z45	Entran	01/19/06
Chest Displacement	081	Servo	11/23/05
Left Femur Load Cell	959	GSE	02/08/06
Right Femur Load Cell	950	GSE	02/08/06

INSTRUMENTS FOR LOW RISK 6 YEAR OLD PASSENGER DUMMY NO. 155 (P1)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P49450	Endevco	03/09/06
Head Y	P49451	Endevco	03/09/06
Head Z	P49452	Endevco	03/09/06
Neck Load Cell	1748	Denton	10/04/05
Chest X	P49443	Endevco	03/09/06
Chest Y	P49445	Endevco	03/09/06
Chest Z	P49447	Endevco	03/09/06
Chest Displacement	155	Servo	03/20/06

INSTRUMENTS FOR LOW RISK 6 YEAR OLD PASSENGER DUMMY NO. 155 (P2)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P49450	Endevco	03/09/06
Head Y	P49451	Endevco	03/09/06
Head Z	P49452	Endevco	03/09/06
Neck Load Cell	1021	Denton	04/25/06
Chest X	P49443	Endevco	03/09/06
Chest Y	P49445	Endevco	03/09/06
Chest Z	P49447	Endevco	03/09/06
Chest Displacement	155	Servo	03/20/06

INSTRUMENTS FOR LOW RISK 3 YEAR OLD PASSENGER DUMMY NO. 032 (P1)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	C23-Y15	Entran	11/15/05
Head Y	C24-A01	Entran	11/15/05
Head Z	C24-J01	Entran	11/15/05
Neck Load Cell	263	Denton	12/21/05
Chest X	A27-Z05	Entran	11/02/05
Chest Y	B05-J13	Entran	11/02/05
Chest Z	B10-Z22	Entran	11/02/05
Chest Displacement	032	Servo	02/07/06

INSTRUMENTS FOR LOW RISK 3 YEAR OLD PASSENGER DUMMY NO. 032 (P2)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	C24-J04	Entran	05/31/06
Head Y	J14-J19	Entran	05/31/06
Head Z	F29-X13	Entran	05/31/06
Neck Load Cell	233	Denton	05/11/06
Chest X	G04-Z26	Entran	05/31/06
Chest Y	J14-J20	Entran	05/31/06
Chest Z	G04-Z09	Entran	05/31/06
Chest Displacement	032	Servo	02/07/06

VEHICLE INSTRUMENTS

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	C09-Y09	Entran	03/09/06
Right Rear Seat Crossmember X	B28-Z13	Entran	03/09/06
Top of Engine X	H10-M18	Entran	06/21/06
Bottom of Engine X	J22033	Endevco	04/04/06
Left Brake Caliper X	AMP95	Endevco	02/28/06
Right Brake Caliper X	AP042	Endevco	02/21/06
Instrument Panel X	K20-J06	Entran	02/03/06
Trunk Z	L02-Z48	Entran	02/02/06

APPENDIX G

NOTICE OF TEST FAILURE

LABORATORY NOTICE OF APPARENT TEST FAILURE TO OVSC

FMVSS NO. 208 TEST DATE: October 3, 2005

LABORATORY: MGA Research Corporation

CONTRACT NO.: DTNH22-03-D-11002 DELV. ORDER NO.: #6

LABORATORY PROJECT ENGINEER'S NAME: Jeff Lewandowski

TEST SPECIMEN DESCRIPTION: 2006 Mercedes E350 Passenger Car

VEHICLE NHTSA NO.: C60503 VIN: WDBUF56J76A841487

MFR: DaimlerChrysler AG Stuttgart

APPARENT TEST FAILURE DESCRIPTION: TP208-13 Data Sheet 5; 4.2; The driver and passenger sun visor air bag warning labels are not permanently affixed to the sun visor. The labels are easily peeled off of the visor.

FMVSS REQUIREMENT, PARAGRAPH S:
S4.5.1 (c) Each vehicle shall have a label permanently affixed to either side of the sun visor, at the manufacturer's option, at each front outboard seating position that is equipped with an inflatable restraint.

NOTIFICATION TO NHTSA (COTR): Charles Case

DATE: 10-9-2005 BY: Jeff Lewandowski

REMARKS: See Attached Photo of Certification Label